Project A-619
Technical Report No. 1

Industrial Site Survey
of
Carroll County, Georgia

by

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June 1962

Prepared under the auspices of the Area Redevelopment Administration
U. S. Department of Commerce
Washington, D. C.

Table of Contents

Figures

Figures (Cont'd) Page

Plates

Plates (Cont'd) Page

Foreword

This is the first major technical report to come out of a planned three-year program which is designed to serve as a "model" or "demonstration" project for the Area Redevelopment Administration's program.

Unlike previous Industrial Development Branch projects with a similar base, this project encompasses a program of technical assistance which has as its primary purpose the implementation of the research findings. As an example, Dr. George Whitlatch, who directed the county-wide site analysis summarized in this report, will now work with local development agencies to help them on problems of control and development of individual sites or districts, establishment of needed policies on land acquisition, plant financing, and so on.

Another facet of the overall program well underway is the collection of detailed information on the existing industrial base, for the purpose of determining opportunities to expand or diversify established companies, or to attract other firms that could profitably locate in the area. Retail and wholesale trade are also undergoing intensive analysis to determine possible opportunities for generating additional income and jobs.

Basic data have been compiled on Carrollton, the county seat, and are being collected on the other towns in the county. The agricultural sector of the economy is under study also to determine what opportunities, if any, may exist for developing food processing or other economic potentials. An overall analysis of the economy of the county is planned.

The manpower resource situation also is under study, with the need for an industrial vocational training program receiving special attention. Similarly, the existing city and county planning program is being reviewed, with the need for revamping Carrollton's central business district getting special study.

As various special needs are determined, local funds will be used to supplement the ARA grant of $108,000 which has made the basic program possible. A total of $22,500 in local funds is expected to supplement the ARA funds over the three-year period.

Finally, one of the project aims is to provide guidance -- possibly in the form of a "manual" -- for similar projects in distressed or underdeveloped areas elsewhere. It is hoped that all aspects of the study will serve as useful guides for comparable research and action programs. Inquiries regarding the overall study and comments on this report will be welcomed.

Kenneth C. Wagner, Head
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Summary

The present survey of industrial site possibilities in Carroll County, Georgia, is a part of a comprehensive analysis of the industrial and economic potentials of that county, initiated in the spring of 1962 under a grant from the Area Redevelopment Administration of the U. S. Department of Commerce. A reconnaissance of eight Carroll County municipalities was made to determine their local site situations and to appraise their respective future industrial potentials. Where possible, recommendations are made that may enhance those potentials.

Included in the survey are the cities of Carrollton, Villa Rica, Temple, Bowdon, Mount Zion, Roopville and Whitesburg, as well as the unincorporated village of Bowdon Junction. Field inspections of these communities were made during May 1962, and more than 40 site areas were investigated.

As the county seat and principal city in Carroll County, Carrollton might naturally be expected to have an industrial potential superior to that of other municipalities in the county. This is substantiated by the present study. In addition to its proximity to the Atlanta area, Carrollton is best able to offer to industry those basic necessities for operation -- power, fuel, water, and sewerage. However, a very inadequate water supply source, lack of a sewage disposal plant, and uneven distribution of sewers are cited up as the most notable handicaps to Carrollton's future industrial growth. The water problem is critical and a solution must be found soon. The established industrial area in the northwest part of Carrollton is considered inadequate to meet future needs, and it is recommended that Carrollton begin to plan now for the development of an industrial district in the southeast section of the city, along U. S. Highway 27.

Villa Rica, on points of size and apparent future industrial potential, is considered the second ranking city in the county. It is the closest of Carroll County cities to Atlanta and this advantage will be increased when Interstate Highway 20 is completed through the south side of Villa Rica. The city has numerous areas, both within and without its municipal limits, that could be adapted to industrial use. Water supply is presently adequate, with plans being made for additional supplies. In general, 6-inch water lines are within reach of most of the favorable site areas. However, sewers generally do not serve those areas, and gas lines to them are of small capacity. Another deficiency is the limited capacities of present sewage disposal plants.

If and when Villa Rica is able to favorably surmount the current uncertainties stemming from the disastrous explosion of the municipal gas system in 1957, it is recommended that definite control be obtained of a selected site area and that its development be started.

On the basis of appearance and topographic situation, Bowdon would have a substantial industrial potential, but this is minimized by the lack of sewerage, an inadequate water supply source, and a limited gas system. Nevertheless, Bowdon is fortunate to have one sizeable industrial tract in the southeast part of town where existing water and gas lines are of adequate sizes and a major highway route is readily accessible. Another sizeable industrial area might be developed in the northeast part of town.

Mount Zion is a very small town, without natural gas or sewerage, and dependent upon a single well of small yield for its water supply. This city cannot expect to attract additional industry under the handicap of the present water supply.

The industrial potential of Temple is definitely limited by its size, relatively unfavorable topographic situation, and the lack of both sewerage and natural gas. However, the city does have a favorable water supply and a system of mains that are of ample size to service the area on the north side of Temple that appears best adaptable to industrial development.

Roopville, also is a very small town that is dependent upon a single small-yield well and is without railroad or sewerage. Even the anticipated installation of a natural gas system in the summer of 1962 will not appreciably increase this town's industrial potential. Two small sites identified in this survey seem adequate to accommodate any industry this town might get.

The hilly topography of the Whitesburg area naturally limits industrial site possibilities. Residential, highway, and railroad developments have further restricted available land in or near the town. Moreover, the city has neither sewerage nor natural gas, and a very limited water system based on two small-yield wells. At best, a town of the size of Whitesburg would have a minimum industrial potential. However, being near the Chattahoochee River, it can readily improve its position by going to that river for its water supply. The town's best industrial opportunity appears to be a sizeable acreage of land along the river, south of town, where there exists the very favorable site combination of railroad, river, highway, power and natural gas.

INTRODUCTION

The future industrial growth of a community is dependent to a large degree upon the local availability of areas of land adaptable to the varied needs of manufacturing operations. It is obvious that a city or town without suitable site areas cannot accommodate new industry, regardless of how effective its promotional efforts may be. Yet, in many instances, communities across the country are trying to obtain new industrial plants without having properly adjusted the scope of their promotional campaign to the realities of their industrial site situation.

Even though a community is fortunate enough to have ample vacant lands available within or outside its municipal limits, there must be adequate utilities within economic reach of these lands for them to even qualify as potential industrial site areas. Further, where possible, the identification of such potential site areas should include lands both on and off railroad, in order to meet the varied needs and preferences of industrial prospects. Where communities are seriously deficient in those utility services common to any industrial site, especially water and sewerage, then it is apparent that their industrial potential is reduced accordingly.

Purpose and Scope of Survey. The present survey of industrial site possibilities in Carroll County is a part of a comprehensive economic study of that county, initiated in the spring of 1962 under a grant from the Area Redevelopment Administration of the U. S. Department of Commerce. Through the application of the findings of this study, it is hoped that the county's future economic development can be substantially increased and improved. Basic to such economic improvement will be the creation of new job opportunities in industrial employment. It is self-evident, therefore, that any appraisal of the future industrial potentials of Carroll County and its several communities must reflect the present industrial site situation and the future chances for accommodation of the desired new industries.

The present survey, consequently, has as its purpose a reconnaissance of the several Carroll County municipalities to determine their local site situations, to appraise their respective future industrial potentials,

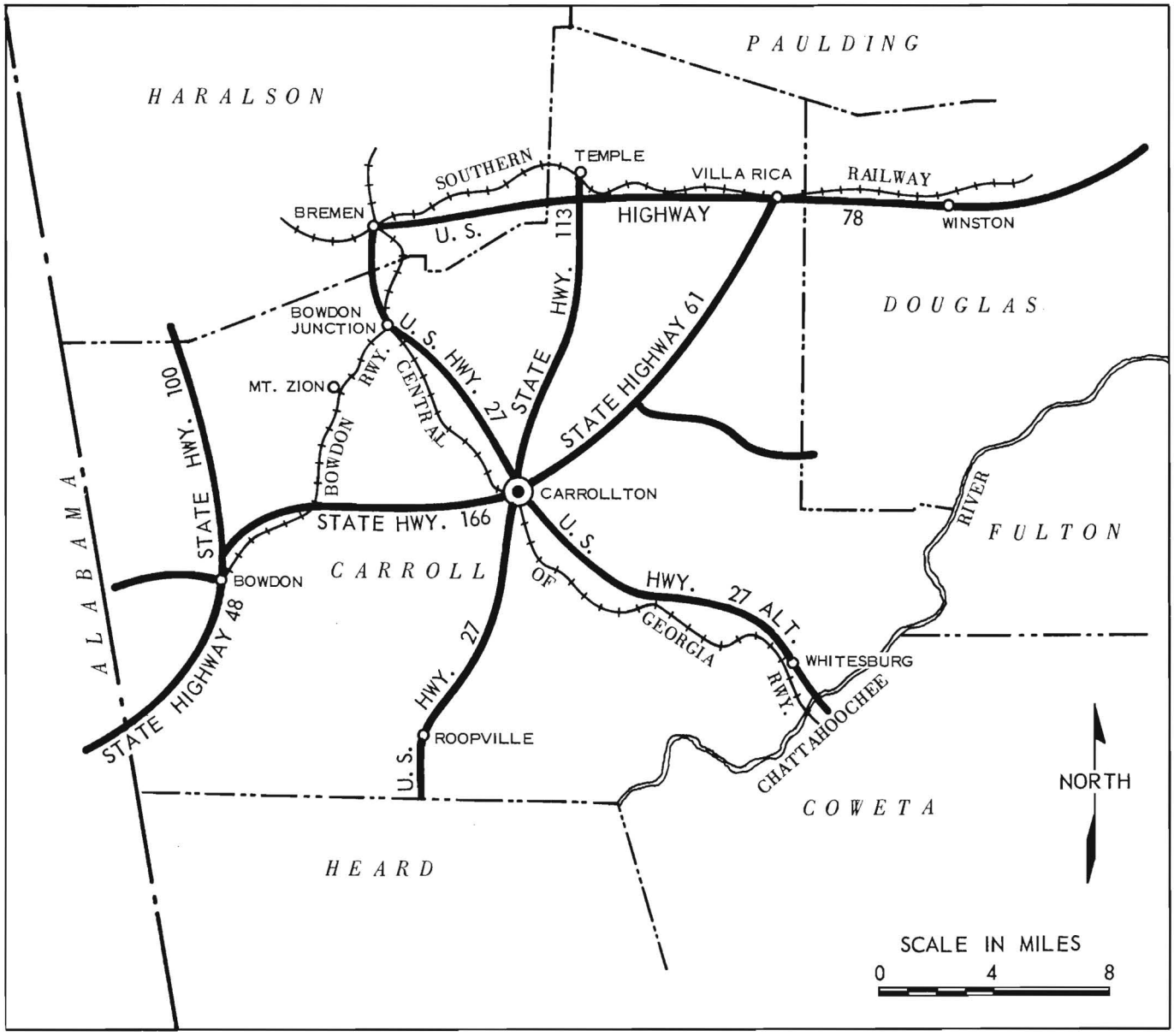


Figure 1. Carroll County index map to principal communities.

and to make any possible recommendations that may tend to enhance those potentials.

The cities included in this survey are Carrollton, Villa Rica, Temple, Bowdon, Mount Zion, Roopville, and Whitesburg. The unincorporated village of Bowdon Junction also was surveyed. (See Figure 1.) Field inspections of these cities were made during the month of May, 1962, and more than 40 site areas were investigated. Selection of site areas for inspection was based largely upon map studies, since nearly all of the county is covered by topographic maps of recent issue. Only the Roopville and Whitesburg areas are lacking in topographic map coverage. During the course of field inspections, additional guidance to possible site areas was obtained from contacts with local representatives of the Redevelopment Committee of the Carroll County Development Corporation, municipal and county officials, and other interested local citizens. These local contacts were quite helpful in the identification of property ownerships and in establishing the locations and capacities of utilities. Especially valuable was the assistance given by Mr. James M. Richardson, Mapping Technician for the Southeastern Appraisal and Mapping Services, Hapeville, who was in charge of the Carroll County tax re-evaluation program. From the property index photos of that program were obtained the property sketches[1/] used in the present report.

Basis of Site Appraisals. In a preliminary survey of this kind, it has not been deemed necessary to fully establish the property boundaries of individual site areas. Nevertheless, an effort has been made to sufficiently identify them in this report as to ownership and to give the location and approximate extent of each site area through description, map, and/or property sketch, so as to permit ready recognition at the local level. However, listing of properties in the present report is in no way intended to indicate that they are available or can be acquired. Described site areas that are recommended here or others in which subsequent interest develops should be investigated locally as to their availability. At that time, if a site area can be obtained, its boundaries should be accurately ascertained and, if possible, the property should be brought under control through long-term option or purchase.

1/ Property lines of sketches are only approximate and are intended only for identification of properties within a site area.

As stated above, the mere availability of vacant land in or near a city does not justify its designation as an industrial site area. Only where these areas are within economic reach of water, gas and electric power lines and sewers of ample capacities to accommodate industrial loads can they be truly qualified as potential industrial sites. Of the several utilities, water is the most essential and, in the present survey, no area has been given serious consideration unless it was relatively close to municipal water lines or near a river or other natural water source. In most instances, this has limited selections to areas within city limits or short distances beyond, even though the water-line capacities in numerous cases are too small for industrial service. In short, a site area's potential is in direct proportion to the number and capacities of these four basic utilities that are within economic reach. Where properties are listed that have access to only the minimum of utility services, such as water, this is not to suggest that the areas are to be classified as industrial sites. They are potential sites that can be realized only by proper development of utilities.

Minimum attention has been given to electric power service at the site areas considered here, not because of its unimportance, but because it has been assumed that electric power would be made available to any selected location where the demand is developed. In the main, industrial power loads within the city limits of Carroll County municipalities will be serviced by the Georgia Power Company. Outside city limits industrial power loads may be serviced by the Georgia Power Company or, depending upon the location of the site and other conditions, by the Carroll County Electric Membership Corporation. This report makes no effort to discuss local power services; these should be checked in the individual communities for specific locations.

At various locations throughout Carroll County, both natural gas and water lines are available but are limited to 2- and 4-inch capacities. Consequently, the potentials of those areas are materially reduced, unless definite plans can be made for bringing larger service lines to the site. As a general rule, the minimum services to an industrial site should be a 6-inch looped water line with adequate pressure to meet local fire underwriter's requirements, a 4-inch high-pressure gas line, and an 8-inch sanitary sewer, with gravity flow to a disposal plant of capacity

ample to accommodate the anticipated industrial waste loads. If a site is near a stream, the maximum distance over which large volumes of water can be pumped economically probably will be under one mile. On the basis of these rough rules-of-thumb, the industrial site situations in Carroll County have been appraised and recommendations made for the guidance of those communities which appear to have sufficient future potential to warrant action.

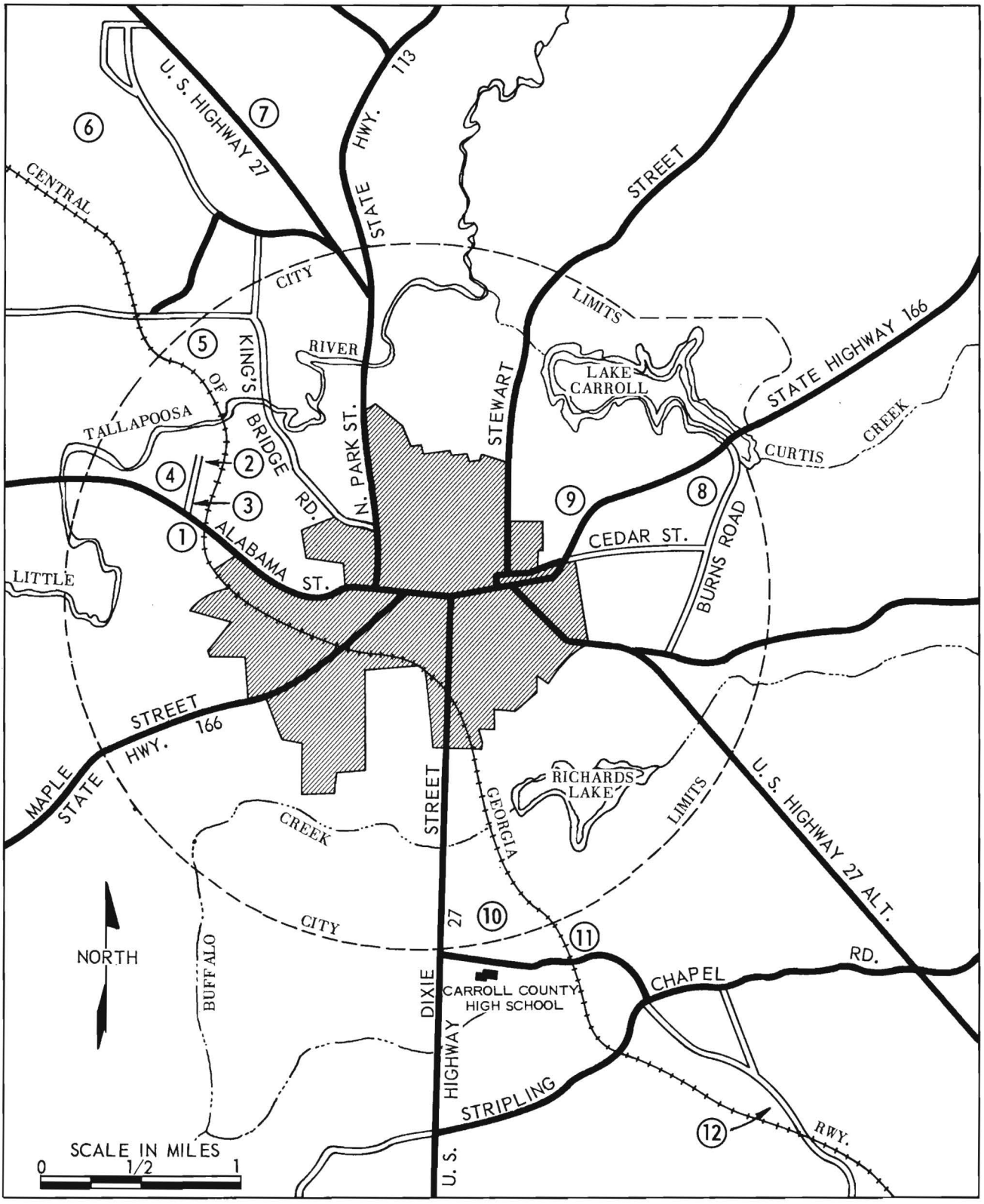


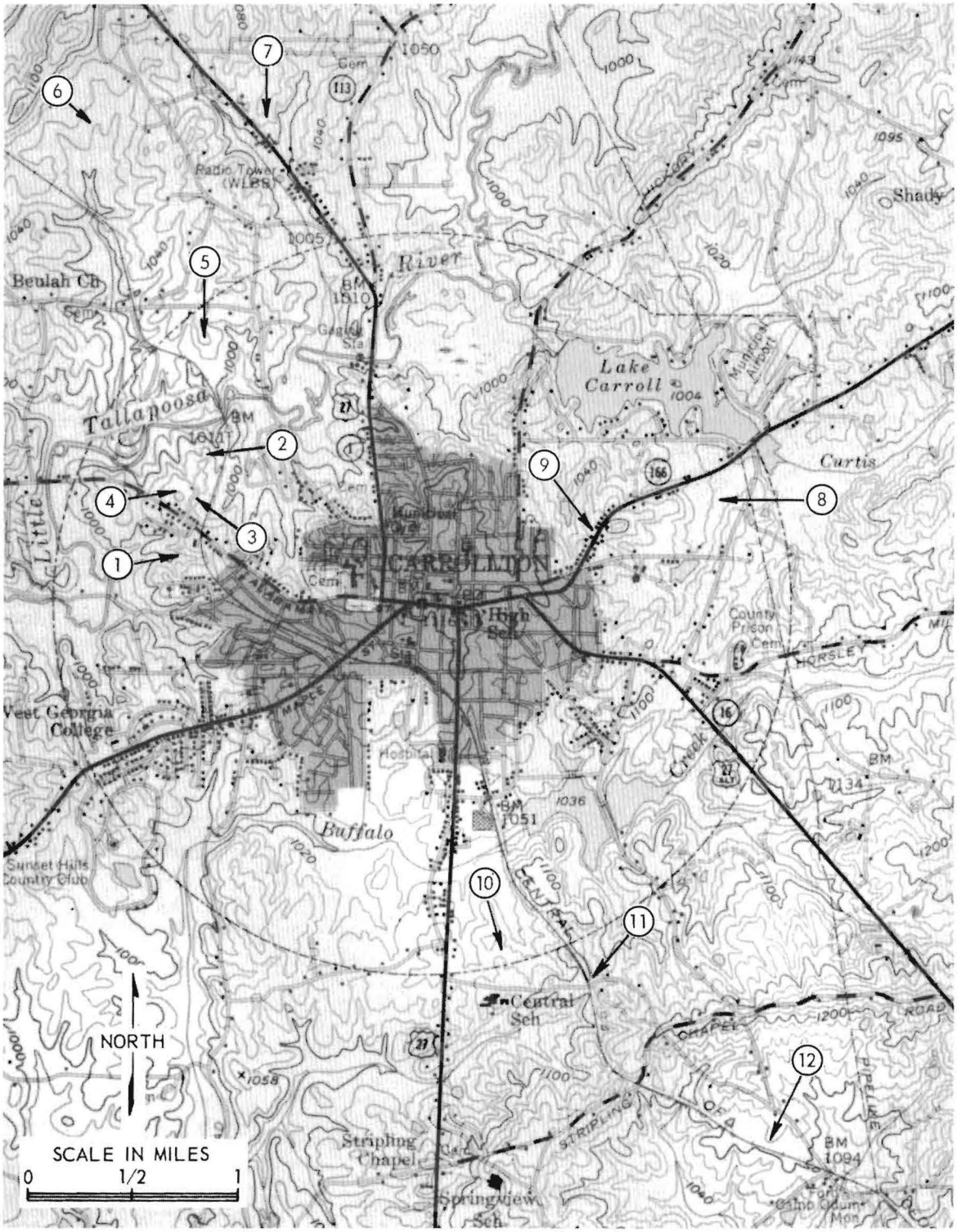
Figure 2. Index map of Carrollton, with locations of site areas.

Carrollton (population 10,973), the county seat of Carroll County, is located near the geographic center of the county. (See Figure 1.) The major east-west highway route is State 166, over which Atlanta is 51 miles east-northeast. U. S. Highway 27 is the principal north-south route. The Central of Georgia Railway serves Carrollton, its route being mainly northwest-southeast through the western half of the city.

Carrollton is situated largely on the south side of the Little Tallapoosa River. Here, beyond the immediate bottom lands, the city occupies a moderately dissected area of general low relief between the river and the upper reaches of Buffalo Creek and its tributaries on the south side of the city. (See Figure 2.) Between the river and the south city limits, a distance of 2 1/2 miles, the land ranges from the 1,000-foot level at the river to the 1,100-foot contour. On the whole, this topography yields substantial areas of relatively flat land between the chief drainage lines, yet the present usages of these lands for commercial purposes, housing, and industry within the city limits have reduced available site areas to a minimum. This is especially true for rail-using sites where the need for proximity to the railroad is complicated by the necessity for being within economic reach of water, sewers, and natural gas.

Carrollton obtains its water supply from the Little Tallapoosa River and from Lake Carroll, a 175-acre reservoir created by the damming of Curtis Creek, a river tributary in the northeast part of the city. Natural gas is supplied by the Atlanta Gas Light Company. A sanitary sewer system, mainly of 8-inch lines, covers most of the city south of the river, excepting a strip that ranges from 1,500 to 3,000 feet wide along the eastern city limits. There is no city sewage disposal plant, and wastes are discharged into the river.

Carroll County Development Corporation Property (1). In 1955, the Carroll County Development Corporation, an affiliate of the Carrollton Chamber of Commerce, purchased some 40 acres of land for industrial sites. The source of funds for this purchase was through loans to the corporation from individuals. Most of this debt was retired by the subsequent sale



(From U.S.G.S. Carrollton quadrangle)

Figure 3. Topographic map of Carrollton, with locations of site areas.

of seven acres of the property to Douglas & Lomason Co., a Detroit headquartered metalworking firm, which erected a plant on the site. The remaining acreage in this property is the only land that presently can be offered in Carrollton to industrial prospects with complete assurance of availability.

The corporation's property is in northwest Carrollton, south of Alabama Street and immediately west of the Central of Georgia Railway. (See Figures 2 and 3; Plate 1.) The 7-acre site acquired by Douglas & Lomason is adjacent to the railroad and served by a rail spur. (See site 1 of Figure 4.) Of the remainder of the tract to the south and west of the Douglas & Lomason site, only approximately one-third to one-half of the acreage is adaptable to site usage, due to the hilly topography. A fairly deep drainage line extends east-west across the property, with the valley slopes cresting in relatively flat knolls and ridge spurs that are 25 to 55 feet above the branch bed. As now projected for development, two sites of 2.5 and 2.8 acres can be created along the north side of the valley, in addition to the Douglas & Lomason site, and two other sites of 2.3 and 5.1 acres, on the south side. Preparation of these sites will require an estimated 87,000 cubic yards of cutting and 60,000 cubic yards of fill. If a rail lead is extended to site 4 as now projected, an additional 22,000 cubic yards of cutting will be required for the fill to bring the track across the branch. Negotiations were under way in the spring of 1962 to acquire the Welcome Hill Church property on the south side of Avenue "C" and just east of site 4. If this is accomplished, the site acreage can be expanded and access improved. The land along the branch is fairly well wooded but the rest of the property is largely open.

The Douglas & Lomason operations presently are supplied water from an 7-inch dead-end main along Alabama Street. An 8-inch sewer that extends from Alabama Street down Jersey Street and thence south and west to discharge into the river also serves these operations and is available to any other plants locating here on the corporation's property. A 2-inch line of the Atlanta Gas Light Company now brings natural gas to the Douglas & Lomason plant but, as noted below, a 4-inch gas main goes to the Trent Tube plant and the gas company is planning to parallel its present Alabama Street line to service this 4-inch line. Inasmuch as the gas company's regulator station is on Alabama Street only 1,500 feet or so east of the railroad, almost any future gas needs in this area can be readily met.

SUMMARY

SITE NO.	AREA ACRES	CU. YDS. CUT	CU. YDS. FILL	ELEVATION
1	7.0	28,424	33,411	498'
2	2.5	15,163	17,040	473'
3	2.8	16,377	14,314	463'
4	5.1	47,128	20,000	475'
5	2.3	8,871	8,871	490'
TOTAL	19.7	115,963	93,636	

NOTE: Excess Cut Needed For Track Fill Across Branch – Total 22,327 Cu. Yds.

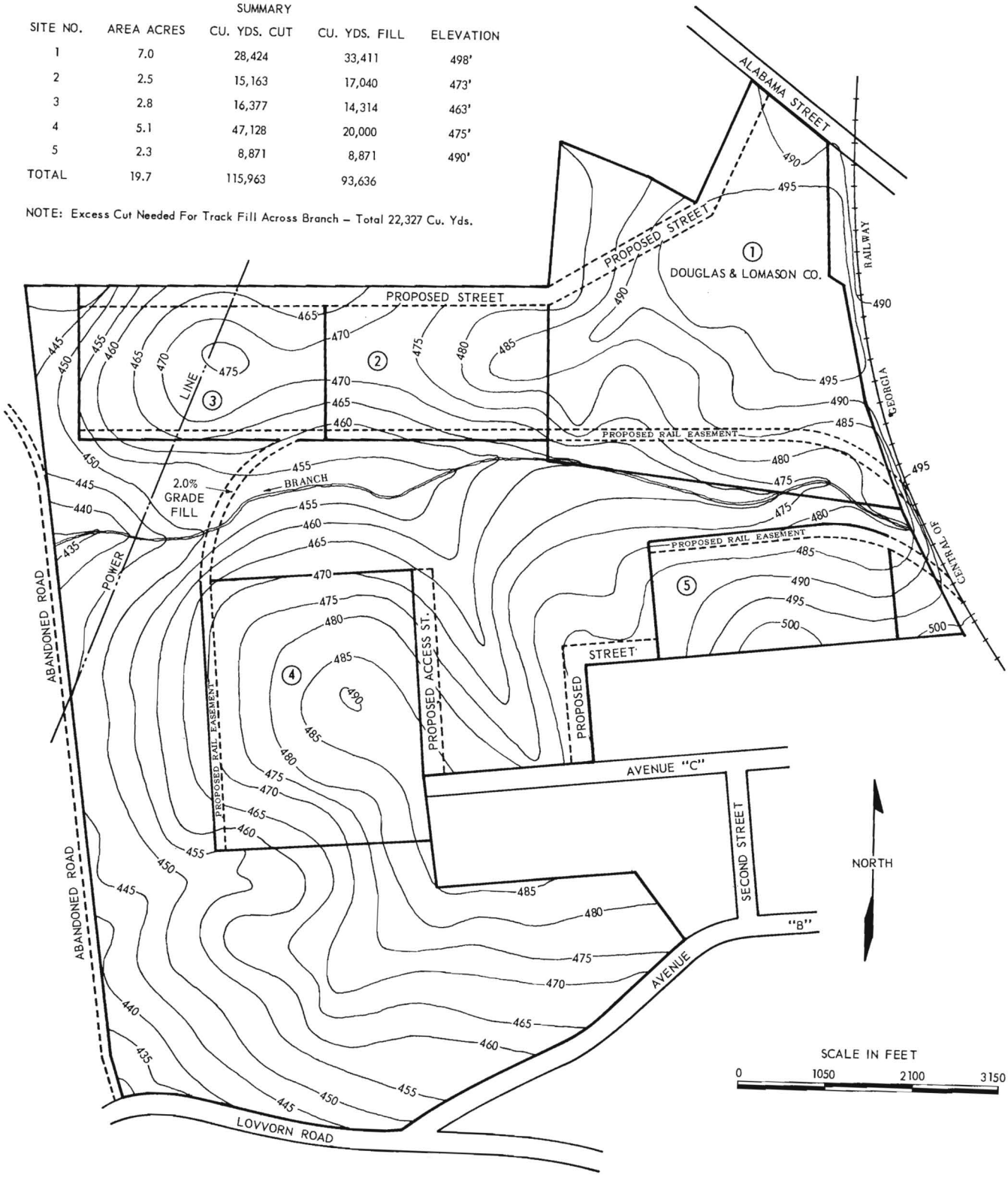


Figure 4. Topographic map of Carroll County Development Corporation's industrial property in northwest Carrollton.

Trent Tube Co. (2). The new plant of the Trent Tube Co. is on a site of about 25 acres along the west side of the Central of Georgia Railway on the north side of Alabama Street, in the northwest part of the city. (See Figures 2, 3 and 5; Plate 1.) The Little Tallapoosa River is to the north of the site. Extensive grading, to depths of as much as 6 and 8 feet along its south side, was done to create this plant site.

When inspected in the spring of 1962, this plant site was not served by a rail spur. However, local sources indicate that a lead will come off the Central of Georgia Railway at a point north of the plant where the railroad level rises sufficiently to permit an acceptable grade.

A 6-inch water main, connecting to an 8-inch line on Alabama Street, has been laid along the access street to the Trent Tube plant. Industrial wastes of the plant will go to an oxidation pond before discharge to the nearby river. Because of elevation differences, sanitary wastes cannot be carried to the sewer on Alabama Street that serves the Douglas & Lomason plant but must be carried by a sewer emptying north into the river. A 4-inch gas line has been extended off Alabama Street to the Trent Tube plant.

O. L. and Dewey Hammond Tracts (3). Immediately south of the Trent Tube site, between the access street to that plant and the Central of Georgia Railway, O. L. Hammond owns a 24-acre tract of open land, occupied only by his residence and some rented housing at the south side along Alabama Street. Dewey Hammond owns a narrow strip along the railroad. (See Figures 2, 3 and 5.) At the north end of these properties, the land near the center of the O. L. Hammond tract is 10 to 15 feet below the higher parts along the railroad and the access street, with a strong slope southeasterly toward the railroad on the south half. However, by grading of the high areas into the lower areas, this tract would make a very useable plant site.

A local proposal for bringing a rail spur into these properties contemplates taking off from the lead into the Trent Tube plant (see above) and extending the spur along the east side of the Dewey Hammond tract until the land there becomes sufficiently low to permit curving the trackage west into the O. L. Hammond tract. It is apparent that such a plan will involve extensive grading, and the economic feasibility of this proposed installation remains to be checked out with the railroad's engineering department.

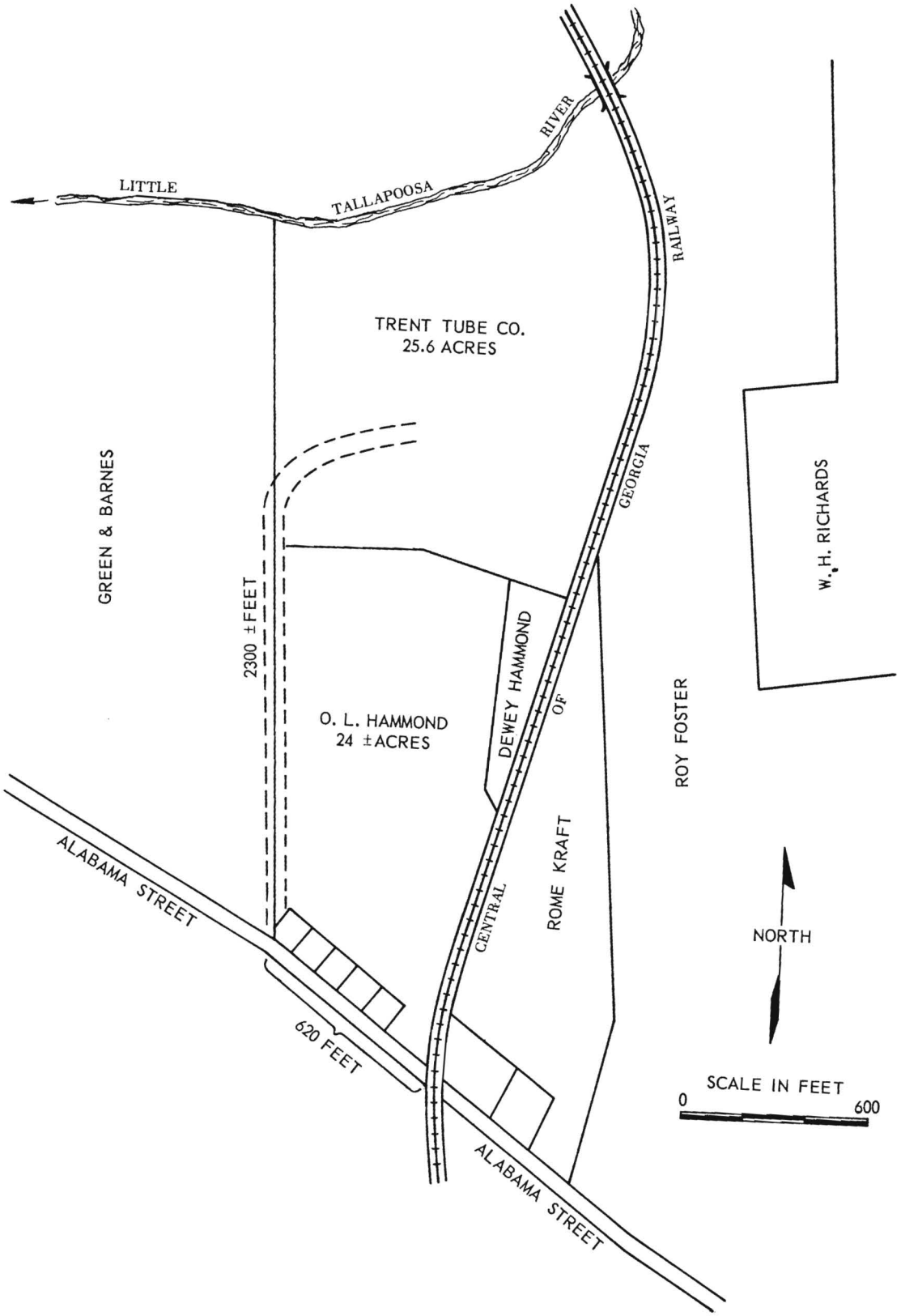
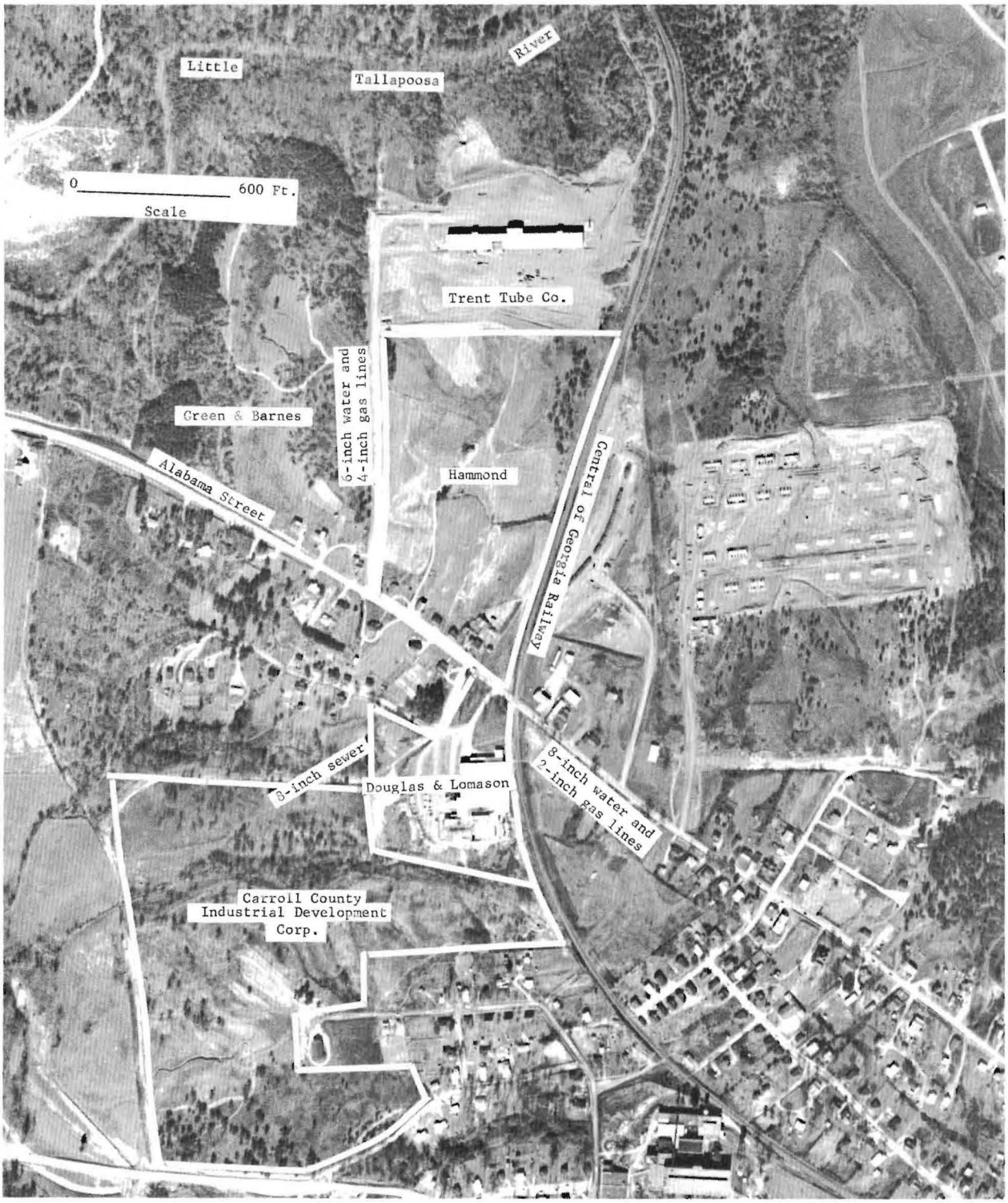


Figure 5. Sketch map of Trent Tube Company and Hammond properties in northwest Carrollton.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 1. Industrial area in northwest Carrollton, showing locations of Douglas & Lomason and Trent Tube plants and nearby site areas.

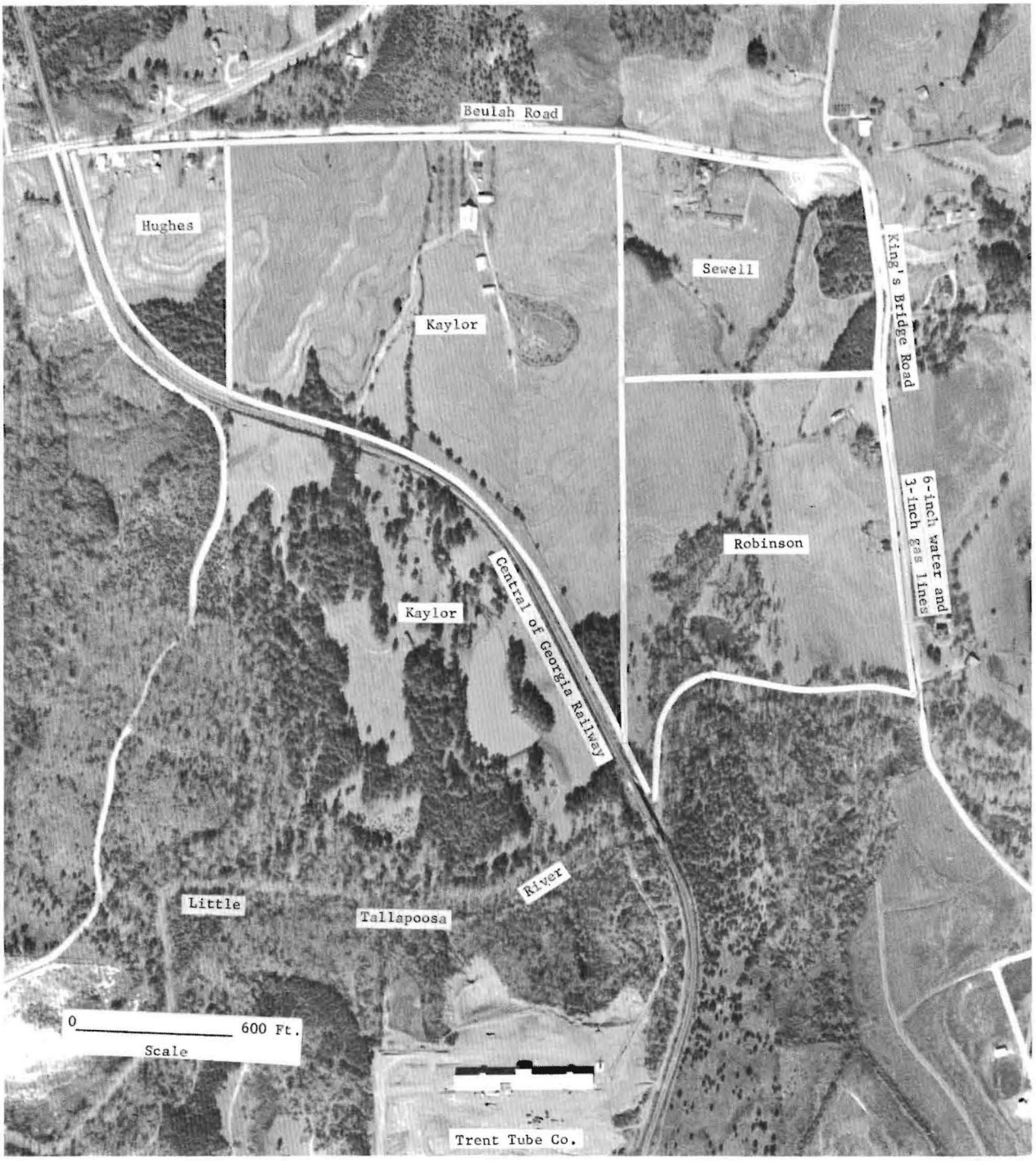
Gas and water mains noted above as serving the Trent Tube plant would be available to this Hammond site. The 8-inch sewer that serves Douglas & Lomason's operations which are south across Alabama Street (see Plate 1 above) could serve this site.

Green and Barnes Tract (4). A 70-acre tract, owned by W. T. Green and Carl Barnes is west across the access street from the Trent Tube and Hammond properties, with Alabama Street bounding the south side. (See Figures 2, 3; Plate 1.) Here, within a 40-foot elevation range, are some 50 acres that are largely open and suitable for development. Toward the north the land breaks into a wooded valley head, while westward toward the river the land breaks sharply to wooded bottom lands. Near the southeast corner of the tract is a small hill, but this can be graded down to fill some of the lower areas to the north. (See Figure 3.) Three houses are in the corner of the tract at the junction of the access street with Alabama Street.

Local information is that a rail spur into this property would come from the nearby Trent Tube plant over an easement to be granted across that company's property. Such a spur obviously would have to follow along the south side of the Trent Tube tract and even this would entail a rather steep grade. On reaching the Green and Barnes property, the spur would have to go southward along the east boundary in order to curve around the valley head that marks this north end of the tract. This would be a long and expensive spur, and its feasibility should be checked by the railroad engineering department before any commitment is made to a prospective industry.

Water, sewer, and gas services noted above for the Hammond tract would be available to this property.

Kaylor, Hughes and Others (5). In the northwest part of Carrollton, the land west of King's Bridge Road on the north side of the Little Tallapoosa River consists largely of open, rolling fields and pasture north to Beulah Road and west to the Central of Georgia Railway. (See Figures 2 and 3; Plate 2.) In the river bottoms, up to at least the 980-foot contour, there is clear evidence of repeated floodings. Above that level, the maximum range in elevation will not greatly exceed 60 feet.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 2. Industrial site area 4, north of the Little Tallapoosa River, in northwest Carrollton. Note that south edge of photo overlaps north edge of Plate 1.

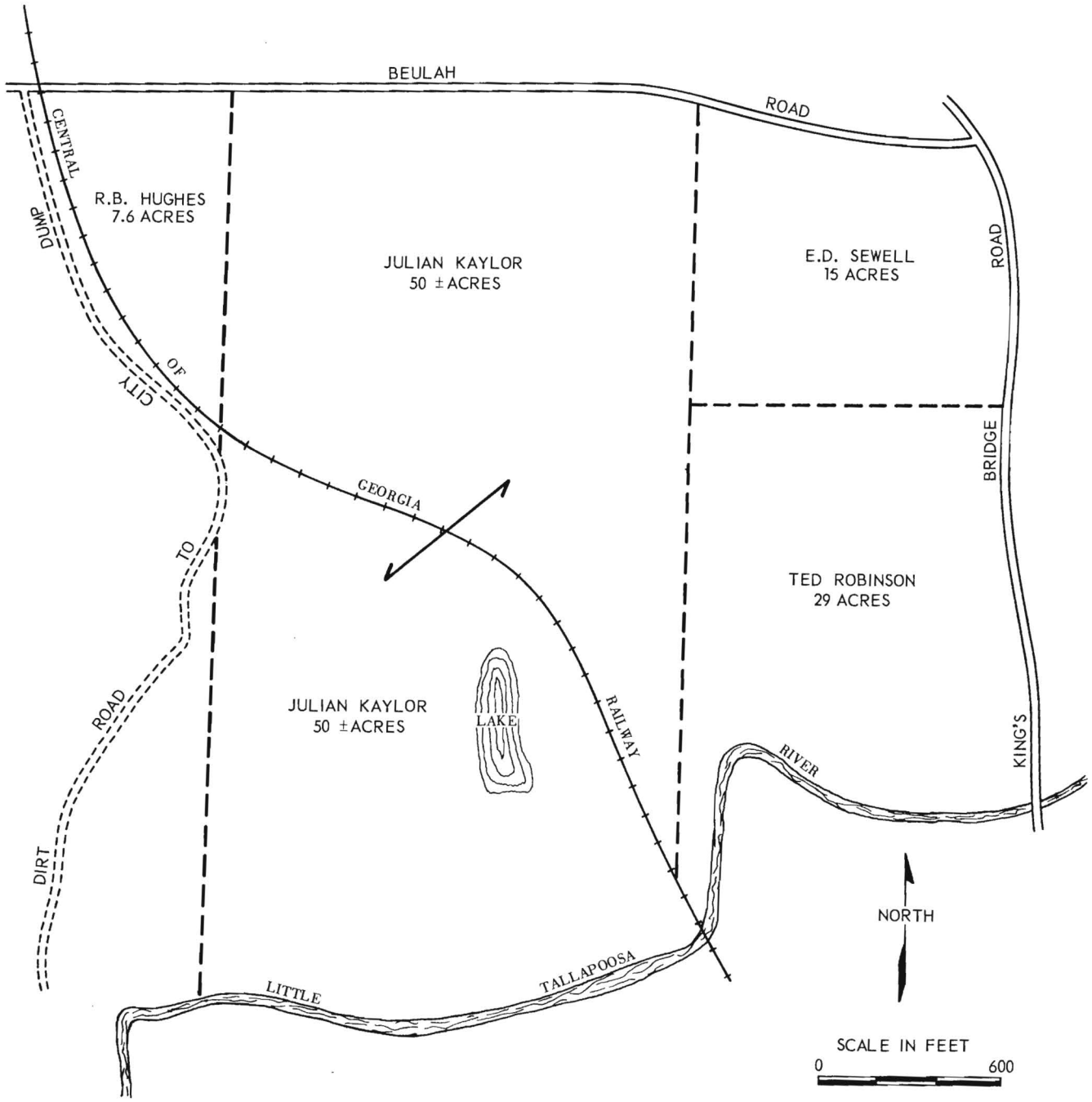


Figure 6. Sketch map of properties in Carrollton site area 4 north of the Little Tallapoosa River.

There are several good quality homesteads along the King's Bridge and Beulah roads (both unpaved), representing the various ownerships within this area. These include Ted Robinson, who owns 29 acres adjacent to the river; E. D. Sewell, some 15 acres at the corner of King's Bridge and Beulah roads; Julian Kaylor, about 50 acres lying west of the Sewell and Robinson properties; and R. B. Hughes who owns the remainder of the area extending west to the railroad. (See Figure 6.)

The holdings of Kaylor in the western part of the area adjacent to the railroad consist mainly of open to partly wooded long, rolling spurs with substantially flat inter-ridge areas, within the 1,000- to 1,040-foot contours. Since this part of the area is underlain by fairly well weathered schist, extensive grading probably would be possible and 25 to 50 acres of plant sites might be developed here, depending on preparation costs.

A rail lead can come into the Kaylor property at a point about opposite the small lake which is on that part of the property west of the railroad. (See Figure 6; Plate 2.) A 3-inch high-pressure gas main, one of Atlanta Gas Light Company's main feed lines, lies along the King's Bridge Road. A 6-inch water line extends north of the river along King's Bridge Road nearly two-thirds of the distance to Beulah Road and then becomes a 2-inch line up to the latter road, where it dead ends. There are no sewers here, but industrial wastes, with proper treatment, could be discharged to the river. However, any such planned disposal to the river must consider the fact that, in the 1954 drought, the flow of the Little Tallapoosa River at Carrollton reached a daily minimum of 170,000 gallons.[1/] Above Carrollton at that time, the river actually had a zero flow. (See Carrollton, "Conclusions and Recommendations" of this report.)

Although King's Bridge and Beulah roads are unpaved, the latter connects at the railroad with a paved road that goes east to U. S. Highway 27.

1/ Thomson, M. T., and Others, Availability and Use of Water in Georgia, Georgia Department of Mines, Mining and Geology Bulletin 65 (1956), p. 126.

Griffin Harris and Others (6). In this area outside the northwest city limits, between the Central of Georgia Railway and an unpaved road west of and parallel to U. S. Highway 27, the topography ranges from the 1,000-foot to 1,060-foot elevations. The land is mainly open to wooded, rolling low ridges and hills for a distance of nearly a mile north from the paved connector road between Beulah Church and U. S. Highway 27. (See Figure 3.) Much of this area is owned by Griffin Harris and other members of that family, according to local sources.

Just north of the homestead on the Harris' "Red Hills Farm," the land breaks to a broad, relatively flat valley head that drains west. It appears possible to bring a rail lead up this valley to near the unpaved road, without excessive grade. However, it would seem best to develop the land adjacent to the railroad, along which it has some 2,500 feet of frontage. Thus, approximately 125 acres could be developed there.

Actually, this area presents a long-range possibility because utility services are not yet available here. The 3-inch high-pressure gas line which, as noted above, is one of Atlanta Gas Light Company's main feed lines, crosses U. S. Highway 27 within a mile of this area. There are no city sewers on this north side of the river. A 2-inch water line is on U. S. Highway 27 to the point where it is intersected by the paved road from Beulah Church; a 6-inch main is farther south, terminating at the junction of U. S. Highway 27 and State Highway 113, a distance of about 1 1/2 miles from the area here considered.

Georgia Hand Prints, Inc. Tract (7). A 50-acre tract has been purchased recently by Georgia Hand Prints, Inc., of Carrollton on the east side of U. S. Highway 27, outside the city limits, approximately one mile north of that highway's junction with State Highway 113. (See Figures 2 and 3.) The tract has 819 feet of frontage along the highway, from which it gradually rises into a flat-topped ridge spur that reaches a height about 40 feet above highway level. Along the relatively flat areas adjacent to the highway, the land is open but becomes thinly wooded along the lower slopes and the top of the spur. In the southeast corner of the property is a small brick veneer building.

The company's purchase of this property is for the eventual expansion of its present operations into a new plant. In addition, it is hoped that

other industrial plants can be located here, thus creating a vertically integrated complex of firms which Georgia Hand Prints can serve and/or which can serve that company.

This tract has a water well, reported to have a yield of 132 gallons per minute. The nearest city water main is a 2-inch dead-end line about 2,600 feet southeast along U. S. Highway 27. The Atlanta Gas Light Company's 3-inch high-pressure gas main crosses U. S. Highway 27 just east of this property.

There are no city sewers here, and any industries locating on this tract might possibly dispose their wastes to a small stream on the opposite side of U. S. Highway 27. A branch along the east side of the Georgia Hand Print tract empties into this stream which, in turn, discharges to the Little Tallapoosa River about a mile to the south.

Mrs. D. L. Burns Property (8). At the east city limits and south of State Highway 166 is an 85-acre tract, owned by Mrs. D. L. Burns, that lies west of Burns Road (unpaved) and extends south to Cedar Street (unpaved). (See Figures 2 and 3.) The land is open, smoothly sloping pasture along the west side of a low ridge whose base merges into a shallow flat drainage line that discharges into Lake Carroll, north across the highway. In the southwest quadrant of the tract, the land breaks sharply off the ridge. Although there is more than a 40-foot elevation difference over the tract, the more northerly extensions of this ridge spur are sufficiently flat and terrace-like to permit development of at least two levels of plant sites.

By grading down a low knoll along the State Highway 166 frontage, this site would be in full view of that highway, giving it excellent prestige value. The municipal airport is almost directly north of this property, beyond the highway and an arm of Lake Carroll. A filling station at the intersection of Burns Road and the State Highway is the only commercial development on this south side of the highway. There is a tenant house near the intersection of Burns Road and Cedar Street on the south side of the property.

A 2-inch water line is along Burns Road for approximately 1,200 feet south of the State Highway and a 6-inch main can be tapped just east of the highway culvert near the southwest corner of this property. The

nearest sewer connection would be an 8-inch line along State Highway 166 at a point about 3,200 feet west of the above-mentioned highway culvert. Discharge to that sewer would require a lift station. A 2-inch gas line of Atlanta Gas Light Co. is along the highway. Although this section of the city is now zoned residential, there is a large sawmill operation on Cedar Street, so that re-zoning of this Burns property for industry should not encounter serious objections.

H. W. Richards Lumber Company (9). In northeast Carrollton, the H. W. Richards Lumber Co. owns property on the north side of State Highway 166, about 0.9 mile west of the city limits. (See Figures 2 and 3.) This is an open, relatively flat tract of 6 or 7 acres that has only about 10-foot elevation difference, except on the west side where the land slopes moderately to shallow drainage. The property has about 600 feet of frontage along the highway, and the company is presently using the property to display a model prefab home. Although this north side of the highway is here zoned commercial, re-zoning of this tract for light industry should be considered.

Crider-Southwire Realty-McPherson Properties (10). On the south side of Carrollton, east of Dixie Street to the Central of Georgia Railway and from Buffalo Creek south to the paved county road that goes east off U. S. Highway 27 past the Carroll County High School, are nearly 200 acres owned largely by R. J. Crider and Southwire Realty Co. (northern part) and Mrs. Florence McPherson (southern part). (See Figures 2, 3 and 7.) In the upland area north of the county road, the land is open to moderately wooded and broadly rolling, with elevation differences generally within a 30-foot range. This upland area gradually descends northward as a broad, rounded to rather flat-topped ridge spur or "nose" and then merges as a series of low, flat noses (mainly on the Crider and Southwire Realty properties) into the bottoms of Buffalo Creek. (See Figure 3 and Plate 3.) In addition to the proximity of the high school, this property has a limited handicap for industrial development in the three new houses and the new Central Baptist Church that have been erected along the north side of the paved county road. However, if a sufficiently wide buffer zone is left to the north of these buildings, there should be no serious objection to the development

(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 3. Area in the south part of Carrollton adaptable to an industrial district development. Properties in area recommended for such district include the Copeland, Crider, Southwire Realty, and McPherson tracts.

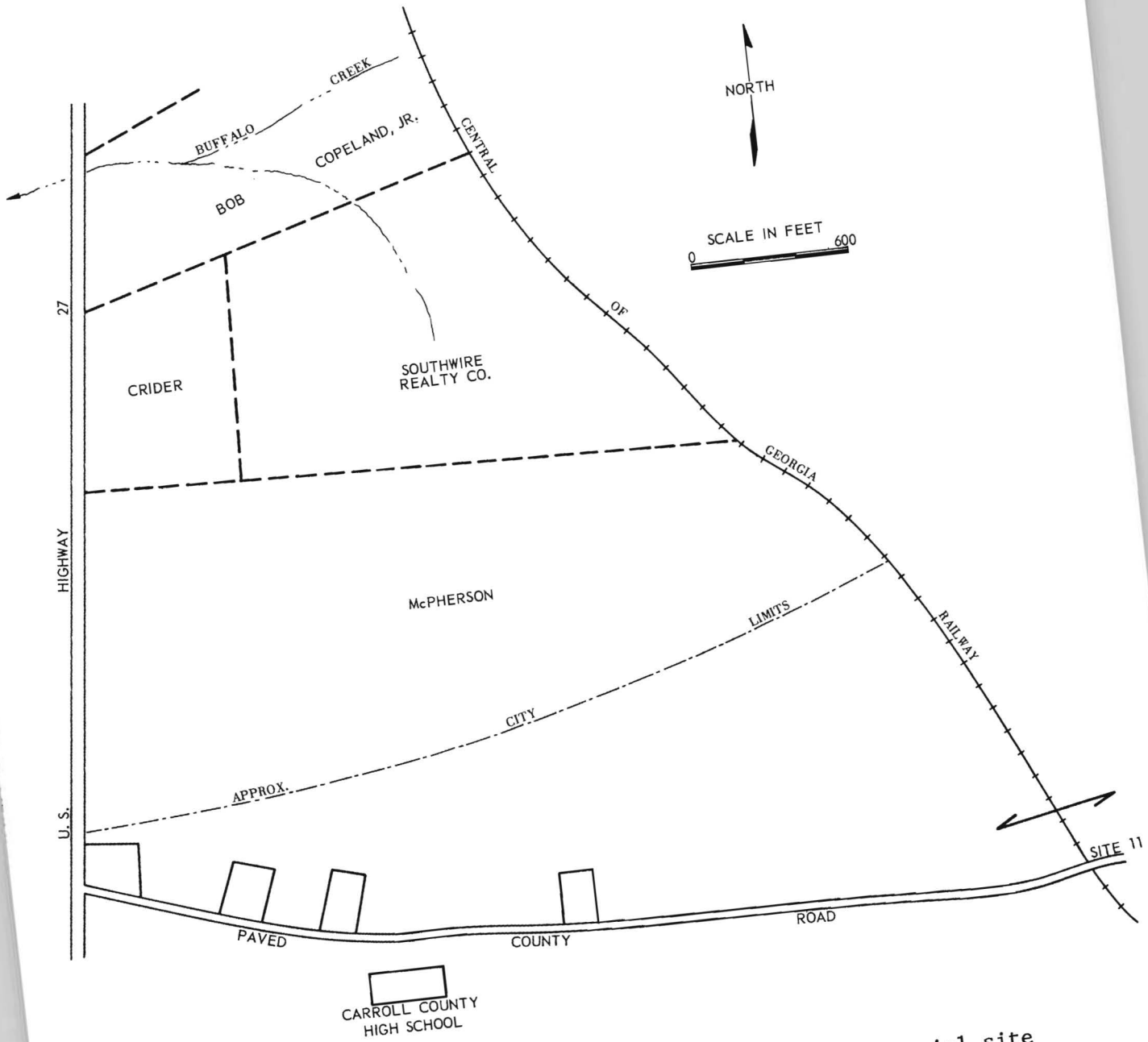


Figure 7. Property sketch of tracts composing industrial site area in south Carrollton.

of industrial plants over the remainder of the tract. That part within the city limits is already zoned for "low-density" industry. Residential housing along U. S. Highway 27 on the west side of the property is mainly low to moderate quality and would not appear to be an obstacle to such proposed industrial development.

A rail lead from the Central of Georgia Railway can enter the east side of this area at a point on the McPherson property about 1,600 feet north of where the railroad crosses the paved county road. This take-off would require a couple of hundred feet of fill to a depth of 5 feet or so and then some cutting and grading to bring the trackage around the head of shallow drainage.

A 6-inch water line is along U. S. Highway 27 and the county road to the high school; this is now a dead-end line and should be looped if it is to serve industries located in the area north of the county road. That area is crossed near its center by an 8-inch sewer connecting to a 12-inch sewer on the south side of Buffalo Creek about 500 feet east of U. S. Highway 27. A 4-inch high-pressure (70 to 80 pounds) natural gas line of Atlanta Gas Light Company extends along U. S. Highway 27 to near the city limits.

In the northern part of this area, about opposite where the new route of U. S. Highway 27 through Carrollton will intersect Dixie Street, a site of 15 acres or more might be graded out of the relatively flat ridge spur or nose that here rises above the bottom lands of Buffalo Creek. Even more site acreage might be obtained by grading down the ridge spur slopes between the highway and railroad to fill in the Buffalo Creek bottoms on the Copeland property. (See Figure 7 and Plate 3.) This reclamation of bottom lands will depend on the depth to which grading can economically extend into the ridge slopes. The soil and weathered zone here has a depth of around 5 feet. Rail lead extension into sites created on these lower areas of land is not feasible, since the railroad is too high up on the hillslopes to the east.

There is much heavy industry north across Buffalo Creek, including the large operation of Southwire Company, a manufacturer of wire and cable products.

Mrs. Florence McPherson Property (11). East across the Central of Georgia Railway from the foregoing site 10, Mrs. Florence McPherson owns

additional property on the north side of the paved county road. (See Figure 3.) Here, in the angle formed by the railroad and road, are 25 acres or more of relatively flat land, within a 20-foot elevation range, that is mainly open except for scattered young trees. (See Figures 3 and 7; Plate 3.) The general level of this tract will not exceed 10 feet above railroad level, and a rail lead can come into the property by a shallow cut along its west side. There is an installed siding to a sawmill about 100-yards south of the county road.

As noted above under site 10, there is a 6-inch water main to the Carroll County High School, about one-half mile west. A 2-inch gas line presently serves the high school and a 4-inch high-pressure line is on U. S. Highway 27 just north of the city limits. The 8-inch sewer that crosses the McPherson-Southwire Realty Properties (see site 10) is about 1,200 feet to the west; disposal of waste from this tract to that sewer probably would require a lift station.

R. B. Brown Property (12). A rural site area of some industrial possibility is the property of R. B. Brown lying between an unpaved county road and the Central of Georgia Railway, between one-half and one mile southeast of where the county road crosses the Stripling Chapel Road (paved). This is roughly two miles southeast of the Carrollton city limits on U. S. Highway 27. (See Figures 2 and 3.)

The land here is largely open, although the northwest part is fairly well wooded and the southeast part is planted to young pines. The 30 acres or so in this southeast part of the property (from the tenant house to where the road crosses the railroad) appear best for industrial development, as the elevation difference here is within a 20-foot range, excepting a low knoll just west of the house. (See Figure 3.) A power line parallels the west side of the property.

A rail lead into the property appears feasible along most of the railroad frontage of the southeast part.

The nearest utilities to this property are those described for site 10 above. It is obvious that this site area on the Brown farm has only long-range possibilities, contingent on normal future extension of water lines into nearby areas. Only under very exceptional conditions could the cost of bringing utilities to this property be justified for the average industrial prospect.

Villa Rica (population 3,450) is in the northeast corner of Carroll County. The eastern city limits extend into adjoining Douglas County. (See Figures 1 and 8.) It is 14 miles northeast of Carrollton, the county seat.

The city is situated in an upland area, largely above the 1,100-foot elevation, between the drainage basins of the Little Tallapoosa River and the Dog River, a tributary of the Chattahoochee River. As a consequence, there are rather extensive areas of fairly level to smoothly rolling lands within the city limits, although drainage dissection becomes more pronounced toward the periphery of the city. The Southern Railway main line crosses east-west through the city and, in its eastern extensions, is closely paralleled by the Bankhead Highway (U. S. 78). West of the city the separation of these highway and railroad routes increases

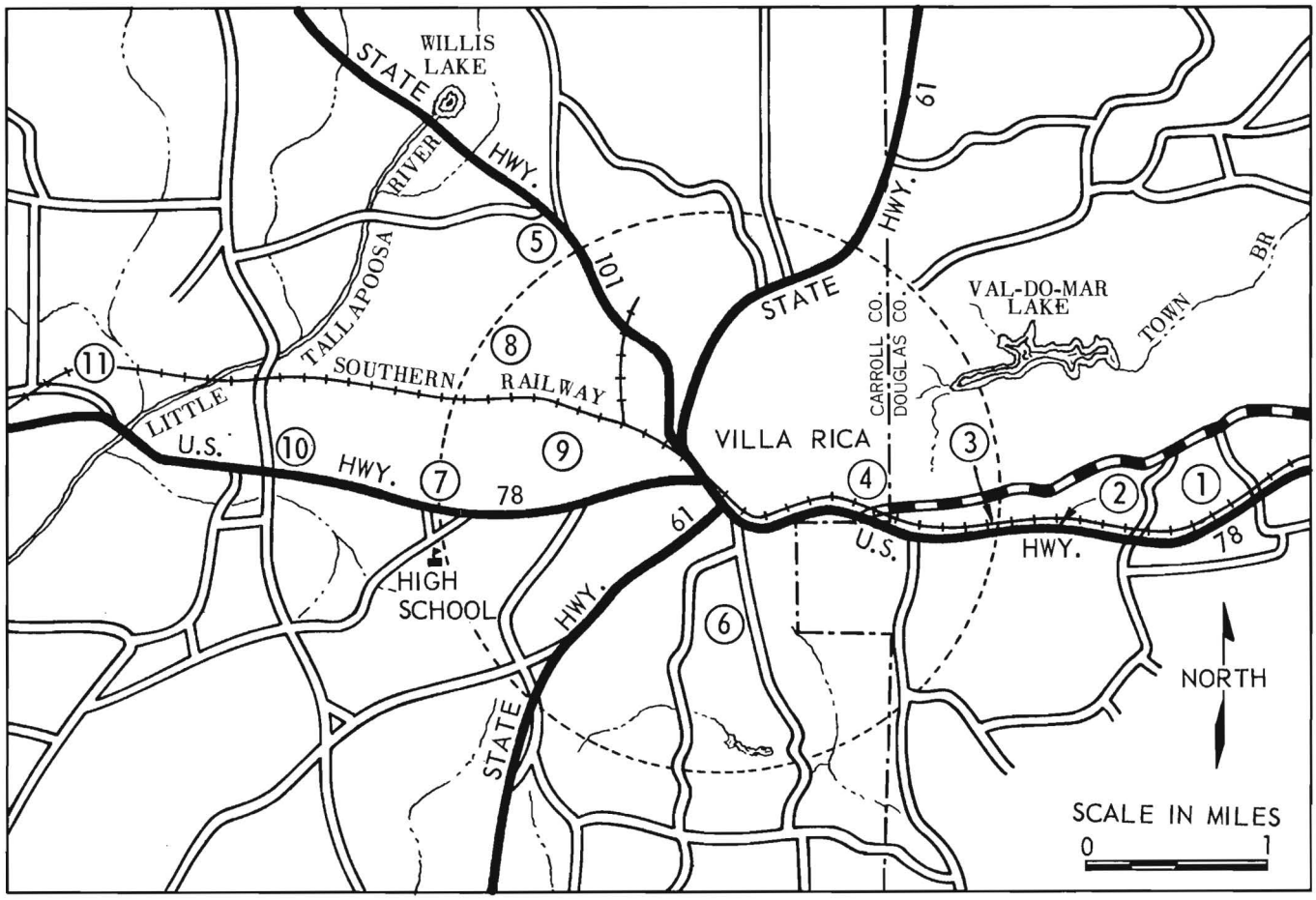
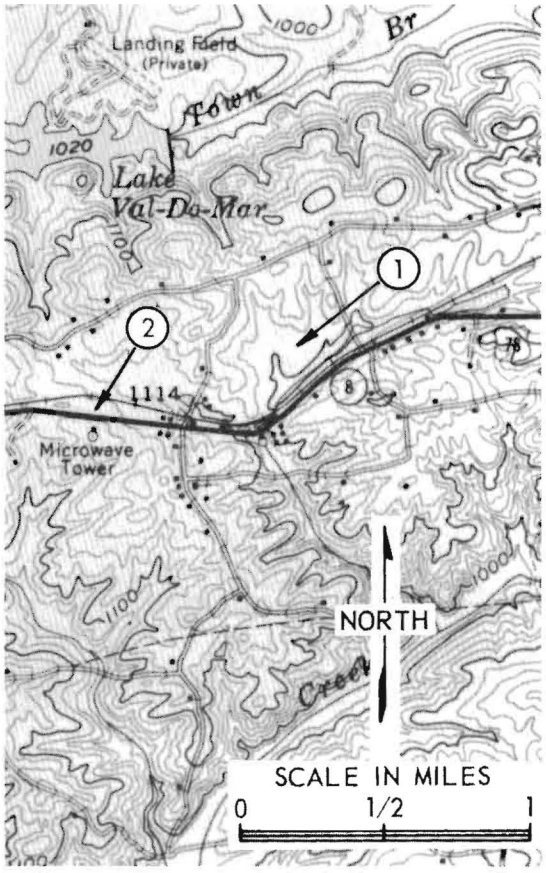


Figure 8. Index map of Villa Rica, with locations of site areas.

to over one-half mile and this, along with more favorable topography, affords a better situation for sizeable industrial site developments.

The city water system is supplied from a reservoir on Burnt Mill Creek near the south city limits. Under present proposals of the West Georgia Soil Conservation District, an additional 75-acre lake would be built at Villa Rica to reinforce its present city water supply. The city water plant presently has a daily pumping capacity of 792,000 gallons, and a daily filtering capacity of 750,000 gallons; maximum daily consumption is about 400,000 gallons. There are two sewage disposal plants now operating at or near capacity. The municipally owned natural gas system is supplied from Southern Natural Gas Company's transmission line at Sand Hill, about 7 miles southwest out the Carrollton Highway (State 61).



(From U.S.G.S. Villa Rica quadrangle)

Figure 9. Topographic map of site areas east of Villa Rica city limits.

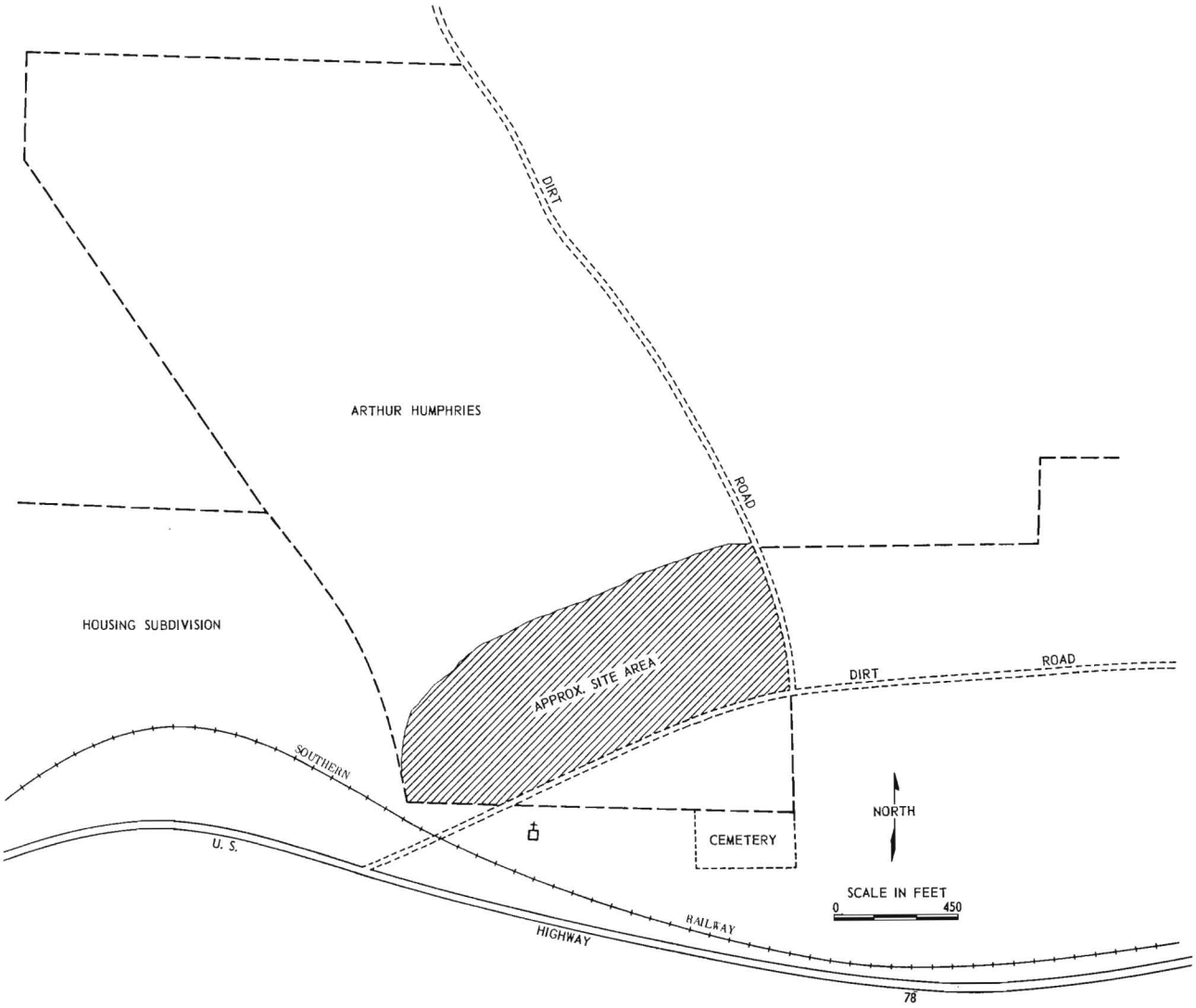
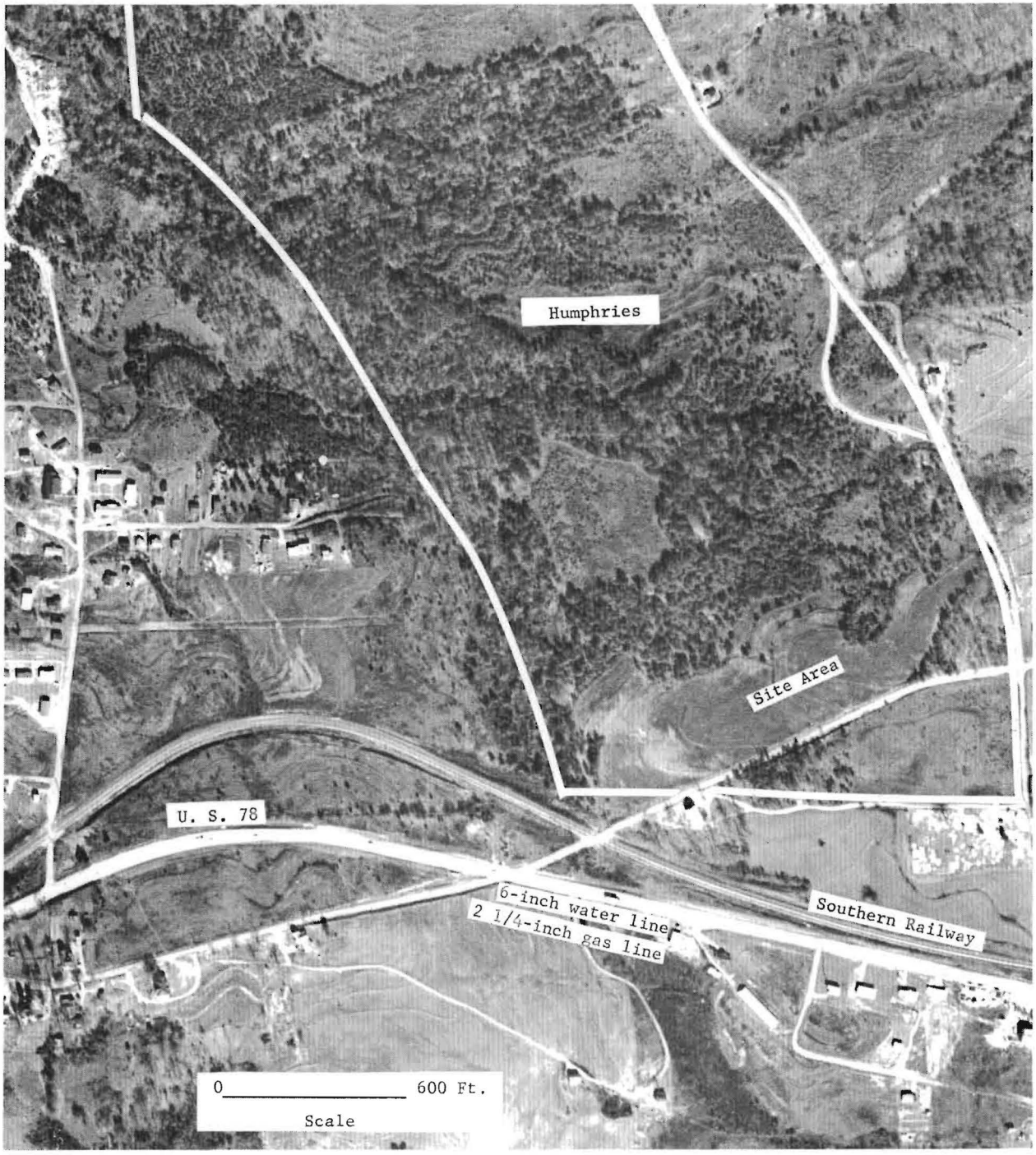


Figure 10. Property sketch of the Arthur Humphries farm near the east edge of Villa Rica.

Norvell Farm (1). About 1 1/2 miles east of the Villa Rica city limits on the north side of the Bankhead Highway is the Norvell farm, which has 50 acres or more that are largely open land within a 20-foot elevation range. (See Figures 8 and 9.) Over this area, limited grading of the lower ends of a couple of small ridge spurs would give a plant site that would be within full view of the highway.

There is a narrow, wooded drainage line along the railroad, and a rail lead into the site area would have to cross this on a fill of some 10 feet in depth. Water (6-inch) and gas (2 1/4-inch) lines are near the city limits along the Bankhead Highway.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 4. Arthur Humphries property in southeast Villa Rica, showing site area adjacent to the Southern Railway.

Loy Hembree Properties (2-3). About one-half mile east of the city limits, Loy Hembree owns a substantial strip of level, open land lying between the Southern Railway tracks and the Bankhead Highway. (See site 2, Figure 9.) Approximately opposite the microwave tower, a maximum depth of about 400 feet is attained, so that a small rail-using industry could be established here.

A 6-inch water line dead ends within 500 feet of the city limits, which are less than one-half mile west of the tower, and a 2 1/4-inch gas line comes almost to the city limits. There is no sewer here.

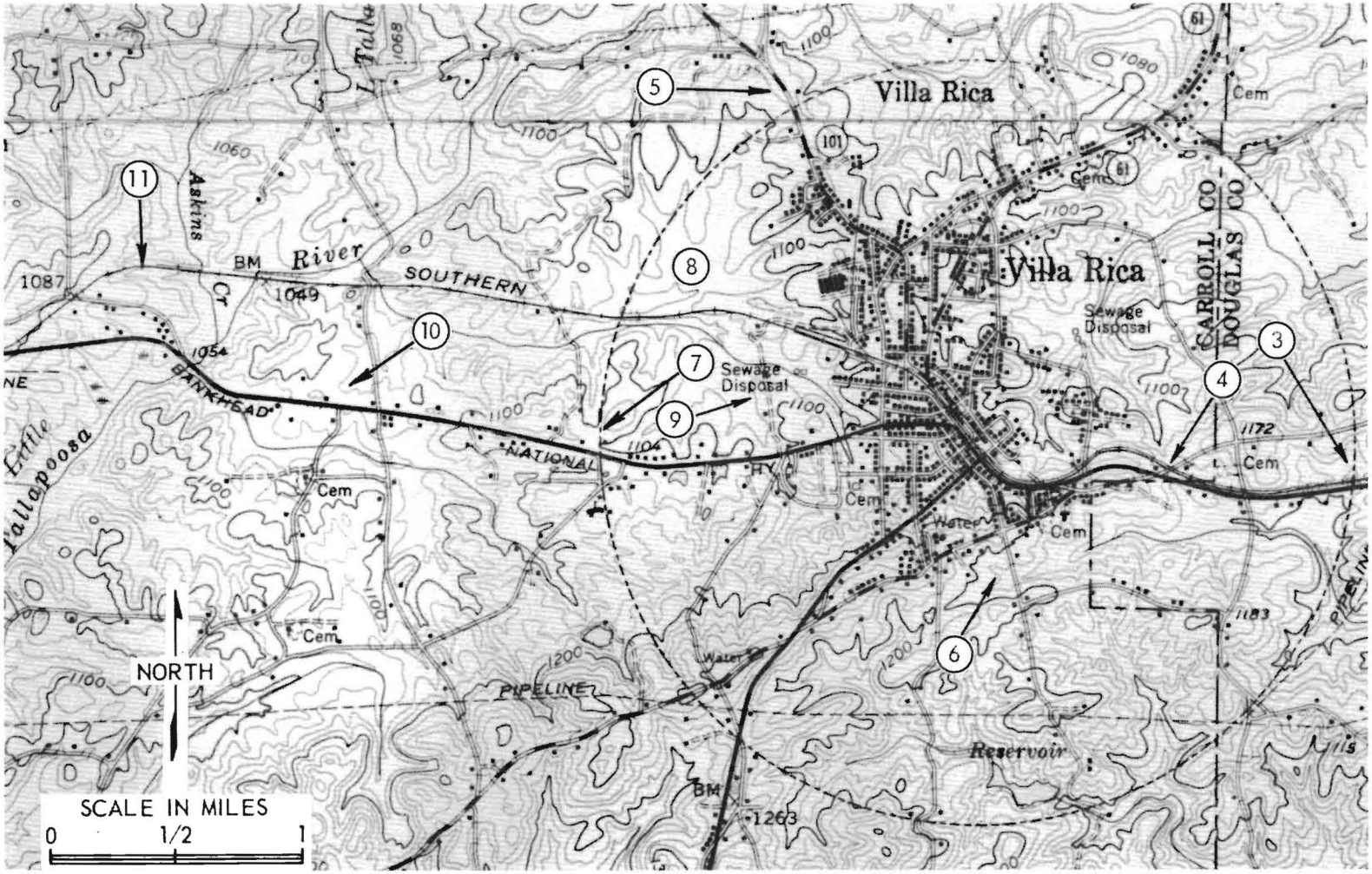
Loy Hembree also owns a hillside property, at the city limits, which extends from the railroad north about 1,000 feet to an unpaved road. (See site 3, Figure 11.) Over some 25 acres that from 1,000 feet or so along the railroad, on both sides of the city limits, the land generally does not exceed a 40-foot elevation range and is only partly wooded.

A rail lead can enter this Hembree property on the east side of the city limits, but it probably could not extend very deep into the tract due to increased grade as the road is approached. As noted above, gas and water lines are available near the city limits.

Arthur Humphries Tract (4). A site of about 25 acres could be developed on the Arthur Humphries farm within the angle formed by the Southern Railway and the unpaved road that crosses these tracks about 1,000 feet west of the Carroll-Douglas county line. (See Figures 10 and 11; Plate 4.) In a strip of less than 1,000-foot depth that parallels the road, the land is open and largely within a 40-foot elevation range, but west of this strip, on adjoining property, the land breaks to a drainage line, beyond which is a considerable residential subdivision.

A rail lead into the tract appears feasible with little or no grading. Gas and water lines are along the Bankhead Highway, as already noted above.

Raburn Estate (5). On the north side of Villa Rica, beginning just outside the city limits and extending north for about three-tenths of a mile to Paradise Road, the Raburn Estate has an area of 30 acres or more of smoothly rolling land on the west side of State Highway 101. (See Figure 11.) This land is open fields for a depth of 700 to 800 feet west to wooded areas and, in its frontage along the highway, is well rounded,



(From U.S.G.S. Villa Rica quadrangle)

Figure 11. Topographic map of Villa Rica area, with locations of possible sites within and west of the city limits.

with a gentle slope to shallow drainage that trends southwest across the tract. In general, elevation differences would be within a 30-foot range and, with minimum grading, this site would be well adapted to non-rail industry.

There is a 2 1/4-inch gas main to the city limits. A 6-inch looped water main that serves this northwestern part of the city, known locally as "Fullerville," is within 1,500 feet of the city limits.

Mrs. W. G. Florence Property (6). On the south side of Villa Rica, Mrs. W. G. Florence owns property west of Wilson Street (unpaved) and south of Sunset Drive (paved). (See Figure 11.) In its frontage of 1,500 feet or so along Wilson Street, the land extends westward as open fields of a broad valley head, with a minor stream draining eastward near the center of the tract. Within the estimated 45 acres in this valley area, elevation differences over most of it will not exceed 30 feet, and the gentle slope on each side of the valley will give building sites requiring minimum grading.

It is reported locally that the route of Interstate Highway 20 will go through this property, and the future industrial value of this tract will depend largely upon how favorably the highway is positioned across the land.

A 2 1/4-inch gas main is at the corner of Wilson Street and Sunset Drive; in fact, two such mains cross at this corner. A 6-inch water main comes up Wilson Street from the water plant farther south on that street. There is no sewer here, and any installation of sewerage would require a lift station.

Jack Lassiter Properties (7-8). On the west side of Villa Rica, Jack Lassiter owns property fronting along the north side of the Bankhead Highway. Here, just at the city limits, is open land that fronts some 800 feet along the highway and extends north to the railroad, largely within a 20- to 30-foot elevation range. (See site 7, Figure 11; Plate 5.) This tract, just east of the old Lassiter homestead, has on it only a tenant house. There is a power line toward the rear of the tract.

The Villa Rica High School is about 1,000 feet south of the highway. Because of this school and nearby residences, this Lassiter tract is best adaptable to light industry.

A 2 1/4-inch gas main is along the Bankhead Highway and a 6-inch water line dead-ends within 500 feet of the city limits. There are no sewers here, but an 8-inch sewer to the city disposal plant goes north from the highway slightly more than one-half mile to the east.

A sizeable partly wooded area, with less than 20-foot elevation difference, is owned by Jack Lassiter to the north of the railroad. (See site 8, Figure 11 and Figure 12; also Plate 5.) Much of this area is within the city limits. Inasmuch as around 260 acres are available here in a single tract, a large heavy industry could be accommodated here.

Rail lead into the property should be no problem since the tract has more than a mile of frontage along the railroad; the tract ranges from about 1,000 to 2,200 feet in depth. The city's western disposal plant is about one-half mile to the southeast on the south side of the railroad. As noted above, gas and water lines are along the Bankhead Highway. Gas can be extended from "Fullerville," the northwest section of the city, which is only some 1,200 feet from this property. A street extension from "Fullerville" probably would be desirable in developing this Lassiter property in order to eliminate the necessity of crossing the railroad.

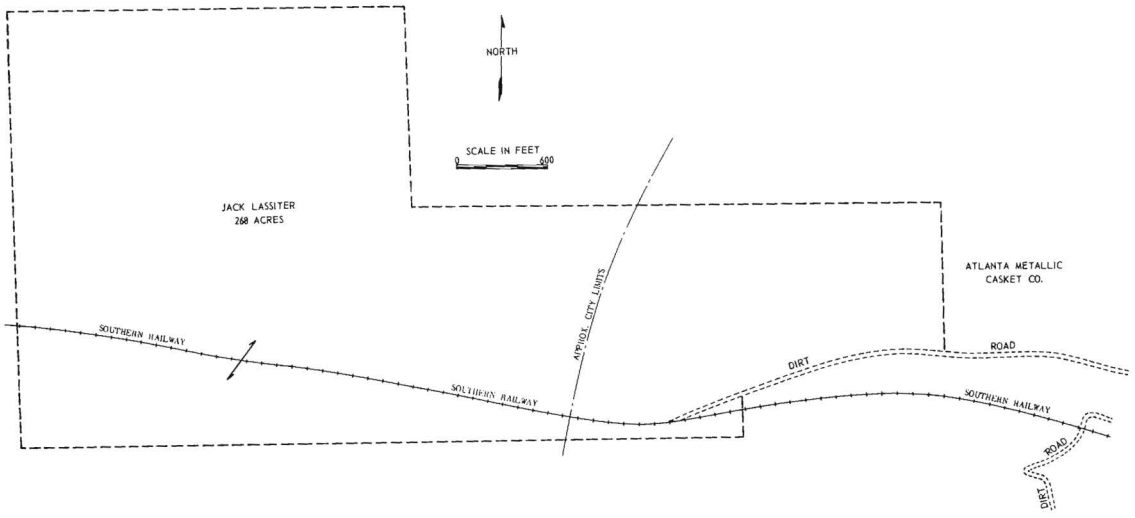
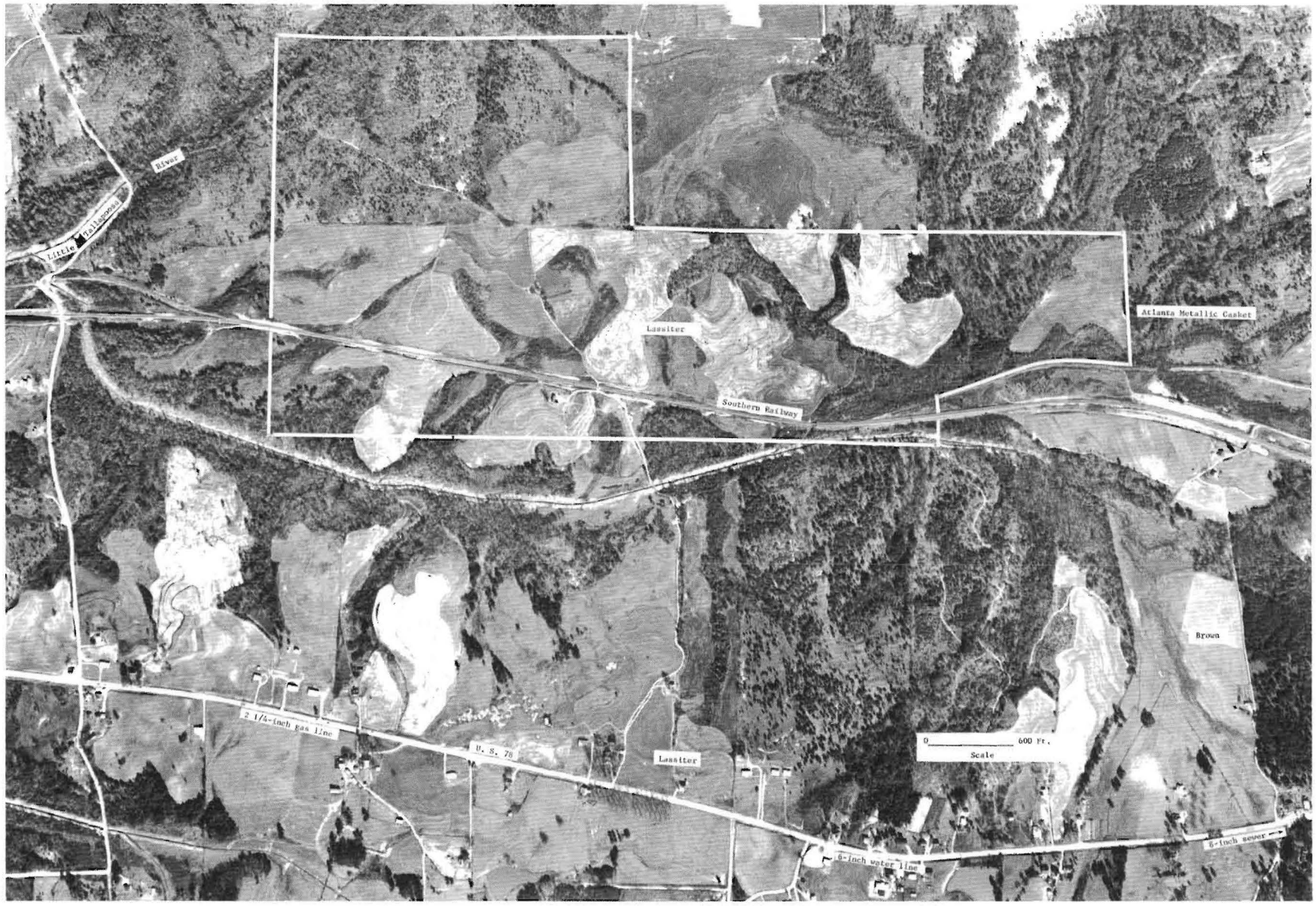


Figure 12. Property sketch of the Jack Lassiter farm along the Southern Railway in northwest Villa Rica.

H. G. Brown Farm (9). West across the dirt road from the city's western sewage disposal plant and south across the railroad from the above Lassiter tract to the Bankhead Highway is the H. G. Brown farm. (See Figure 11; Plate 5.) This is another sizeable tract, mainly of open fields, that is largely within a 20-foot elevation range.

Along the Bankhead Highway are the 2 1/4-inch gas and 6-inch water



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 5. Northwestern section of Villa Rica, showing properties of Jack Lassiter and others north of the Bankhead Highway.

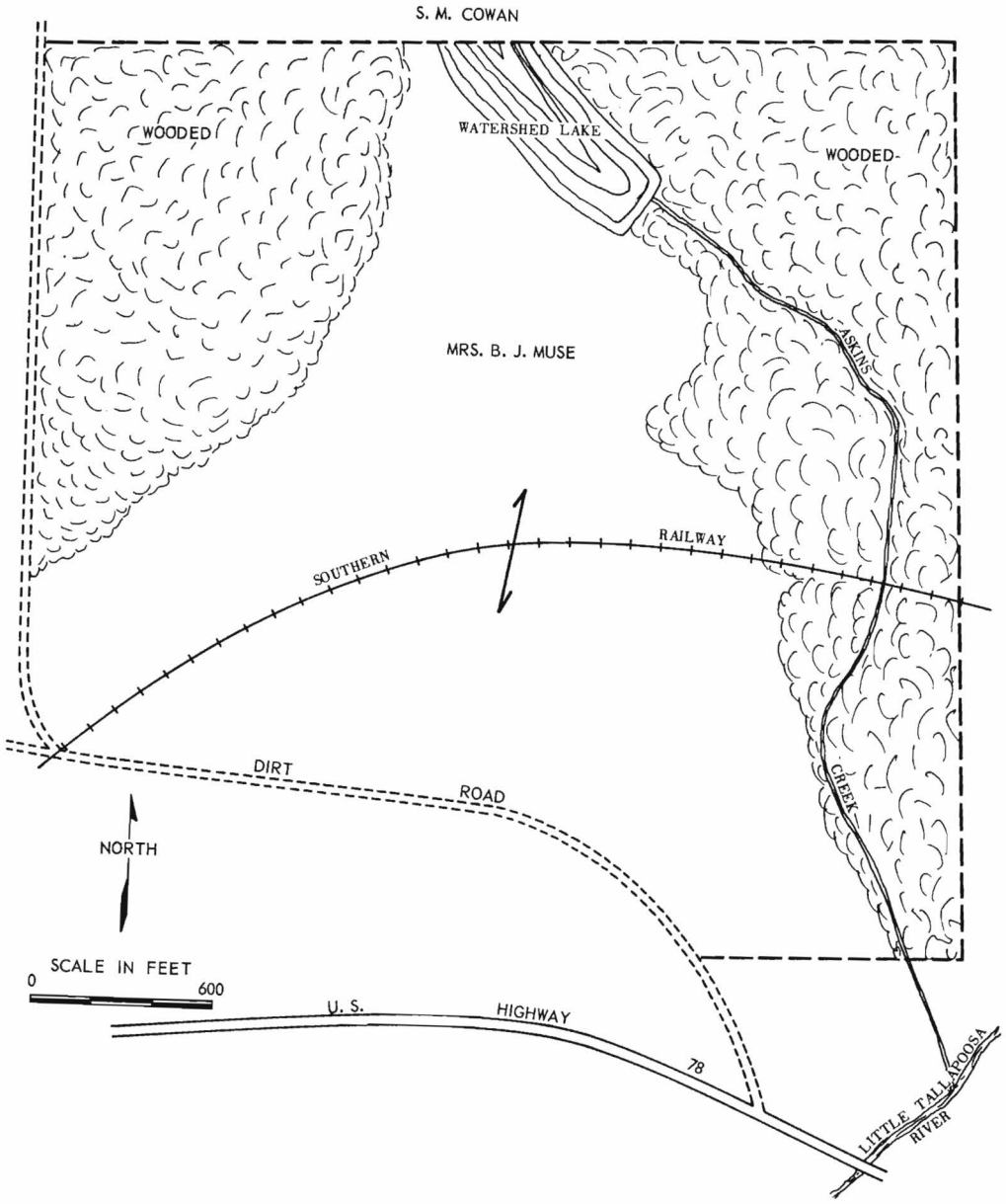


Figure 13. Property sketch of the Mrs. B. J. Muse farm about 1 3/4 miles west of Villa Rica.

lines noted above under the "Lassiter Properties."

West on Bankhead Highway (10). West of the Lassiter homestead for a mile or more along the north side of the Bankhead Highway are several hundred acres of open, rolling land that, over depths of 700 to 1,000 feet, does not greatly exceed 20-foot elevation differences. (See Figure 11.) Possible handicaps to development of these lands are the recent construction of a number of new residences along the highway and a shallow soil, as indicated by granite outcroppings.

Mrs. B. J. Muse Property (11). About 1 3/4-miles west of the Villa Rica city limits, the Bankhead Highway (U. S. 78) crosses the Little Tallapoosa River. Here, west of the river, between the Southern Railway and an unpaved road that angles northwest off the Bankhead Highway, are 75 to 100 acres of the Mrs. B. J. Muse property. (See Figures 11 and 13.) West from the bottom lands of Askins Creek, the land is mainly within a 40-foot elevation range and is sparsely wooded to open. A rail lead can come into this part of the property, possibly with limited cutting and filling. Land in the bottoms area, below the 1,060-foot contour, probably is subject to flood.

A 2 1/4-inch gas line is within 1,500 to 2,000 feet of the Little Tallapoosa River along the Bankhead Highway. However, there are no developed water and sewerage systems here. The Little Tallapoosa River at this point had zero flow during the 1954 drought.[1/] Since then, a lake has been created nearby on Askins Creek (see below). On the north side of the Southern Railway, across from the above-described part of the Muse farm, a site area of some 40 to 50 acres could be developed along the lower gentle slopes of a ridge that here tends to parallel the railroad. The land within the 1,080-foot contour is especially attractive and is largely open.

A rail lead can come into this part of the property on a 5-foot fill, necessary to cross a low area that extends along the railroad.

As noted above, natural gas is the only nearby utility service. However, on the north side of the Muse farm is an earthern dam, built under the direction of the Soil Conservation Service on Askins Creek, that has created a 58-acre lake which extends into the adjoining S. M. Cowan farm.

1/ Thomson, M. T., and Carter, R. F. Surface Water Resources of Georgia During the Drought of 1954, Part 1 - Streamflow, Georgia Department of Mines, Mining and Geology Information Circular 17 (1955), p. 79.

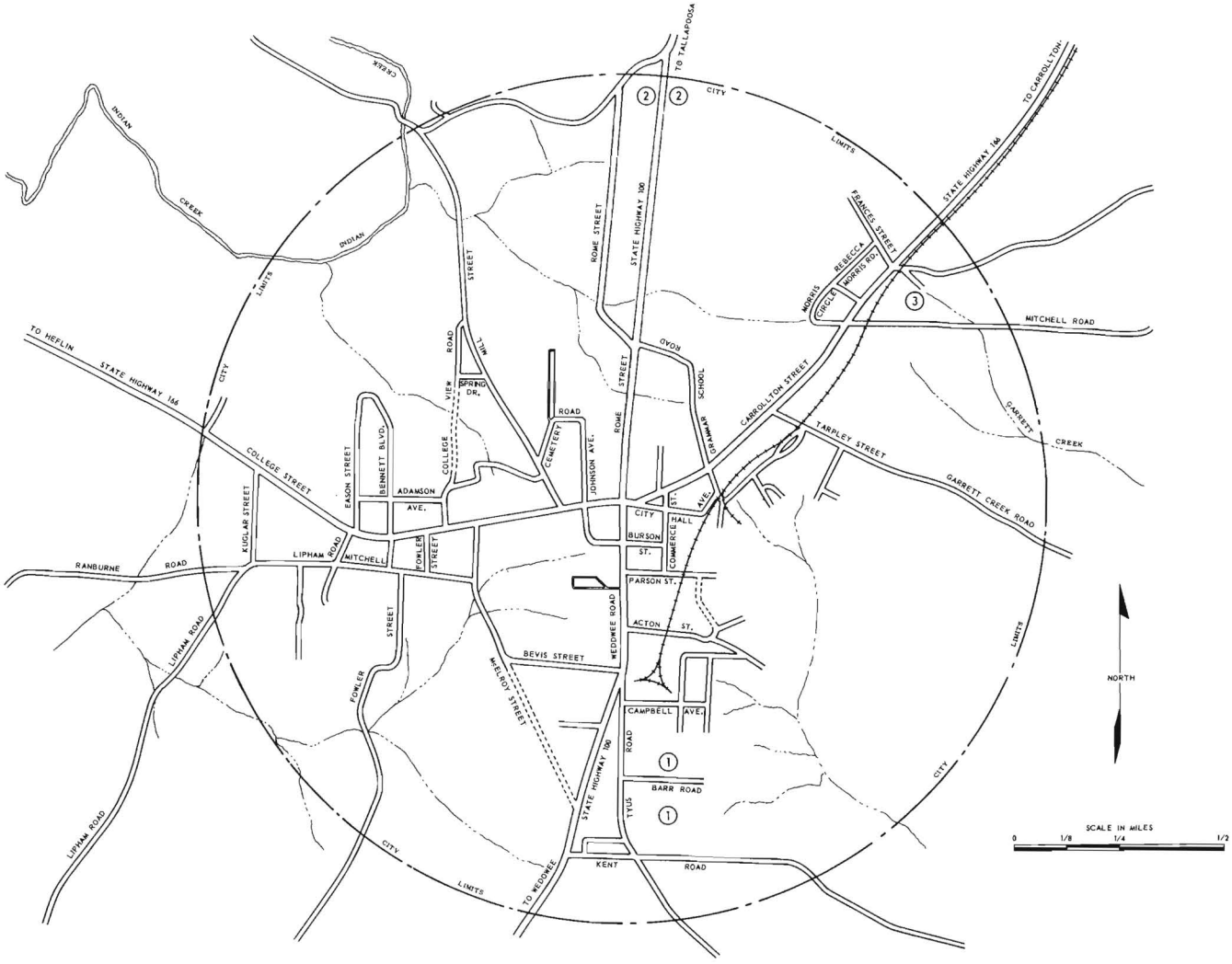


Figure 14. Index map of Bowdon, with locations of site areas.

Bowdon is a small city (population 1,548) in western Carroll County, 12 miles west of Carrollton. (See Figure 1.) It is an attractive city. The business district is clean and progressive-looking, and the residential areas along the major highway routes are above average, for the most part.

The topographic situation at Bowdon is favorable to industrial site development, since this is an area of broad, gently rolling uplands, with only moderate drainage dissection. Nevertheless, the possibilities at Bowdon are limited by a weak water system which has not been able to extend its services beyond the city limits. Even Jonesville, a suburban community about a mile northeast of the city limits on State Highway 166, is not served by the Bowdon water system. The system has a pumping and filtering capacity of only 350 gallons per minute. In view of this water limitation, the present survey was kept mainly within the corporate limits, and here the general growth of good residential housing along major highway routes has materially reduced the opportunities for developing industrial sites. This is especially true along State Highway 166 which, in its route through northeast Bowdon, is closely paralleled by the tracks of the Bowdon Railway. Unfortunately, the railroad does not own any property along its route, and the extensive housing largely precludes industrial developments adjacent to the railroad right-of-way. An additional handicap of Bowdon is the lack of sewerage. Engineering studies for a sewer system have been made, but there presently is insufficient water for its operation. There is, however, a municipally operated gas system.

Although the two major site areas 1 and 3 described below (see Figure 14) are suggested for rail-using industries, it seems desirable to point out that the availability of rail service at Bowdon is not sufficient to fully offset its other industrial deficiencies. The Bowdon Railway is a private branch operation, connecting to the Central of Georgia Railway at Bowdon Junction, and it affords only minimum freight service. At best, branch railroad locations are not as attractive

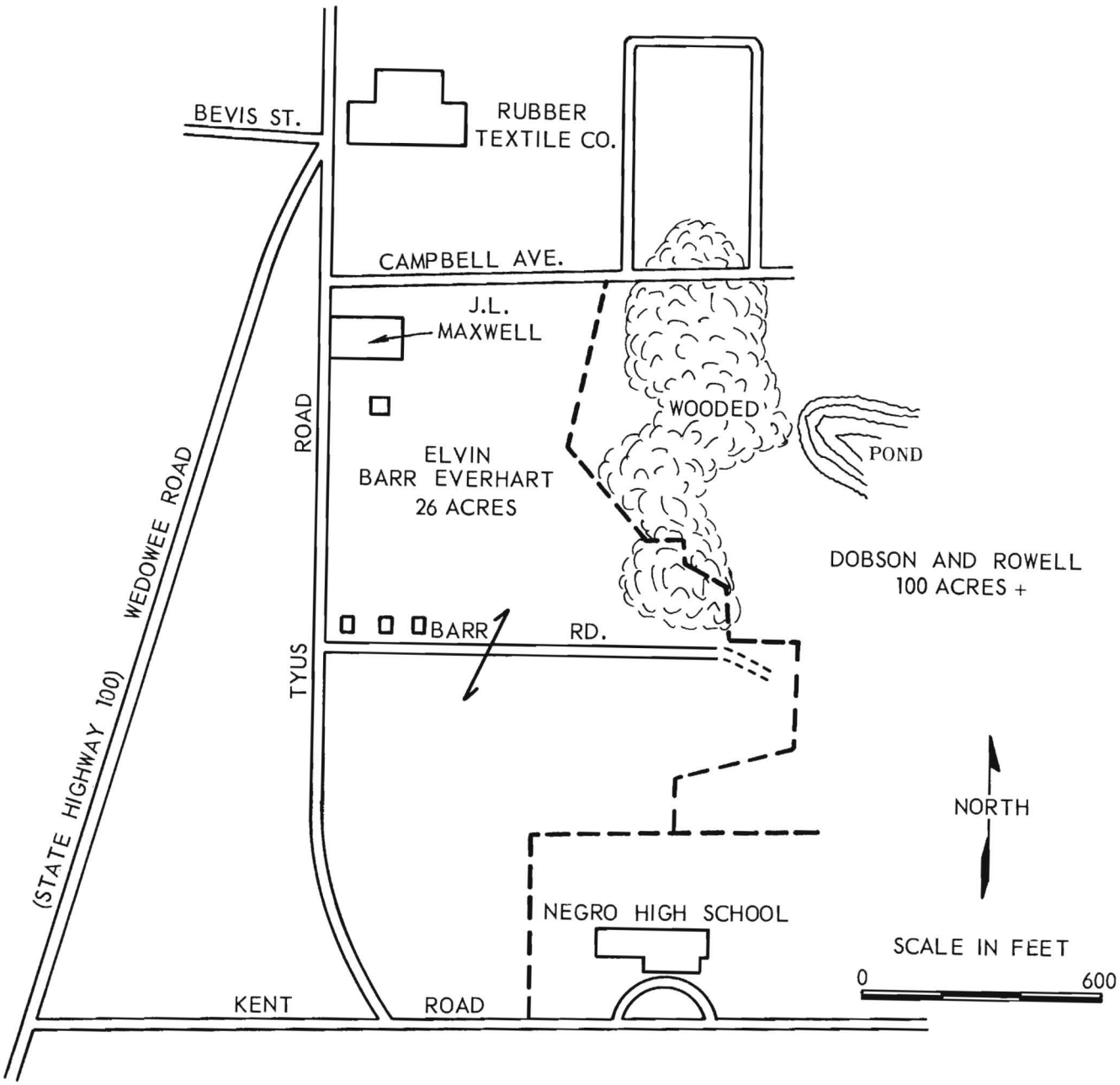
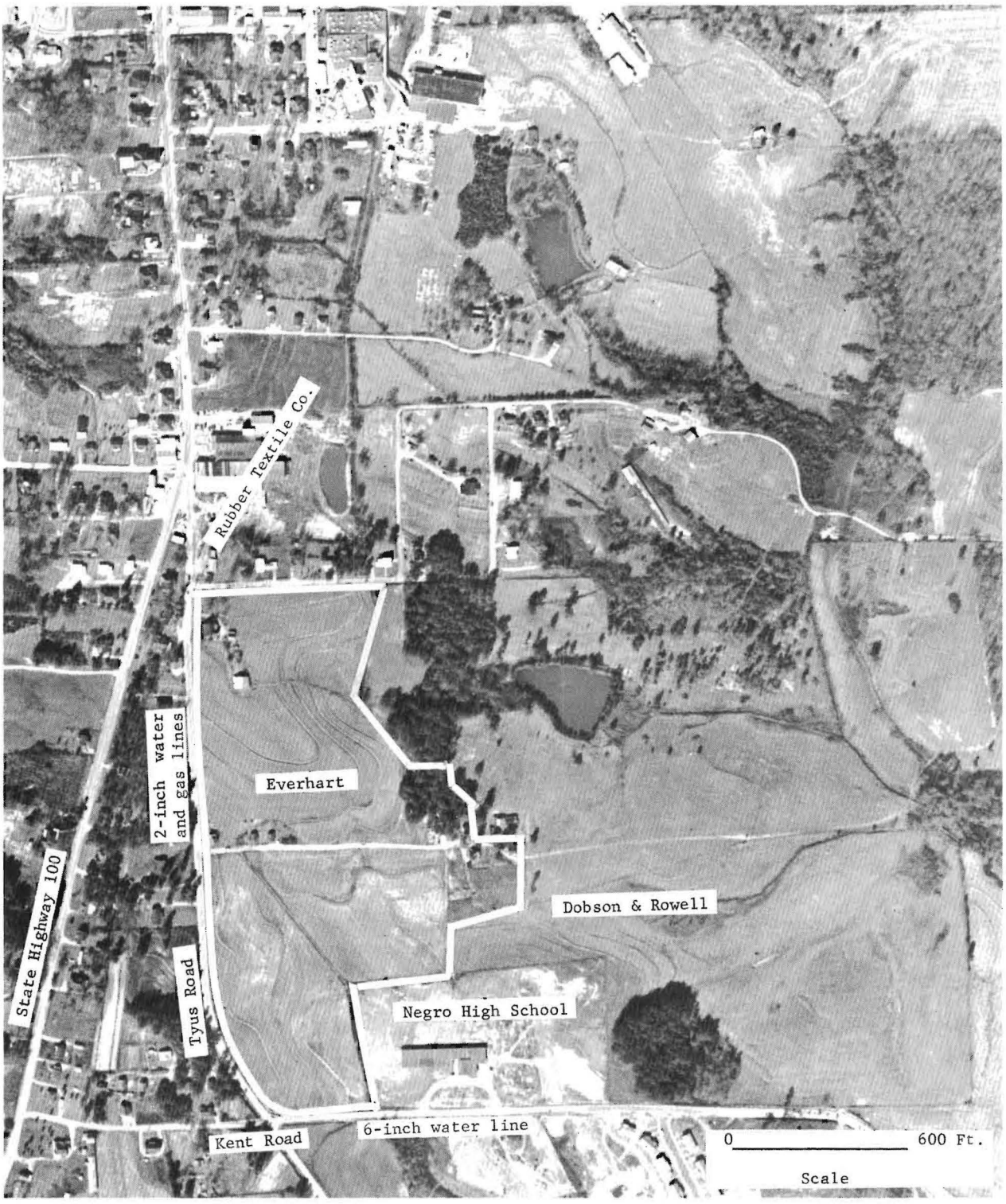


Figure 15. Property sketch of the Everhart tract in the south part of Bowdon.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 6. Everhart property on the south edge of Bowdon, along Tyus Road. Note Dobson & Rowell property adjoining to the east.

as main line locations, so Bowdon with its other locational limitations is here regarded as having only moderate industrial potentials. However, strengthened water and gas systems and installation of sewerage could improve this potential, especially if extension of these services beyond the city limits can be generally done.

Elvin Everhart Tract (1). Probably the best industrial site in the Bowdon area is a tract of 26 acres, in the south part of the city, east of Tyus Road and extending from Campbell Street south to Kent Road. (See Figures 14 and 15; Plate 6.) This is a part of the Barr Estate and is now owned by Elvin Barr Everhart, an heir reportedly living in Atlanta. Near the middle of this open field area is an unpaved street, Barr Road, along which are three Negro tenant houses; J. L. Maxwell owns a small lot in the northwest corner. North of Barr Road the land is quite level, showing an elevation difference of only 5 to 10 feet, but south of this road, the land slopes to drainage in the southeast part of the tract, the overall drop in elevation being about 10 to 15 feet. Across this drainage line, along Kent Road, is a Negro high school.

The Bowdon Railway, which now terminates at Parson Street, formerly terminated at a "Y" to the east of the Rubber Textile Co. plant just north of Campbell Street. It would be practicable to extend the railroad into this Everhart property, and the owner of the railroad, Mr. William C. Roop, president of the Commercial Bank at Bowdon, has indicated his willingness to make such an extension for a suitable industry. Since the north side of Campbell Street is completely lined with small low- to moderate-priced homes, it may be necessary to acquire one of these houses in order to get a rail right-of-way into the Everhart tract.

A 6-inch water line is along Kent Road to the Negro school and 2-inch water and gas lines are along Tyus Road. A 4-inch gas line can be tapped at the corner of Bevis and McElroy streets about 1,400 feet west of the intersection of Tyus Road and Campbell Street. The industrial possibilities of this Everhart property are greatly enhanced by the fact that the Dobson and Rowell property which adjoins to the east contains over 100 acres of open, similarly level land. Thus, the combining of these two properties into a single area delimited by Campbell Street extended on the north and Kent Road on the south would create a sizeable industrial site.

Joe B. Moore Property (2). On the north side of Bowdon, State Highway 100 is lined nearly to the city limits with high type residential developments. However, just inside the city limits, there are open areas on both sides of the highway which reportedly are owned by Joe B. Moore. (See Figure 14.)

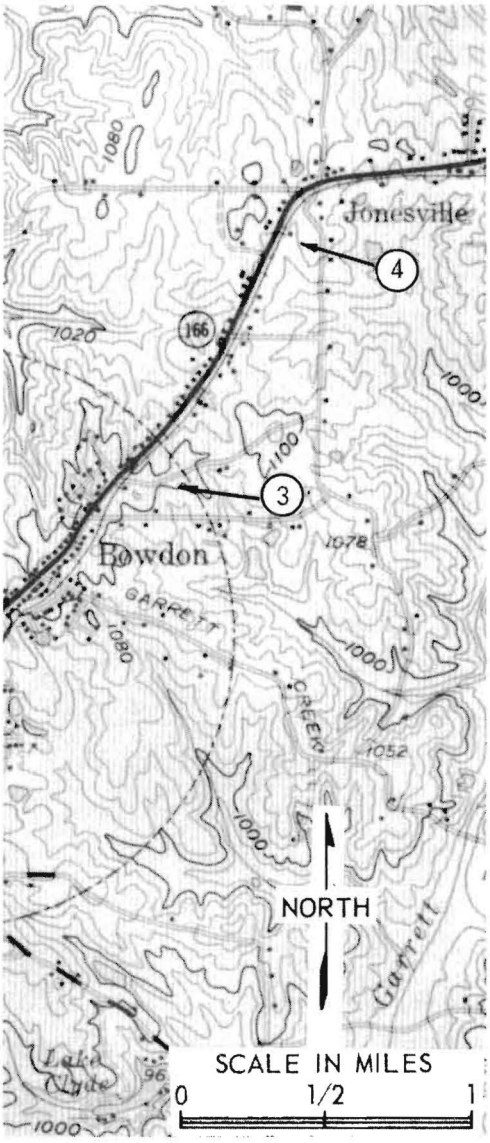
On the west side of the highway, from the second fire hydrant to the city limits, is a partially wooded hill area, which rises a maximum of some 15 feet above the highway before breaking sharply to lower land beyond the city limits. This area might be graded into a good 10- to 15-acre site.

East across the highway is a similar but somewhat flatter hillcrest area that would make a site of similar acreage.

The above-mentioned fire hydrants are on a 6-inch water line. Along State Highway 100 is the 3 1/2-inch high-pressure gas supply lateral that serves Bowdon off Southern Natural Gas Company's transmission line, located about 7 miles north of the city.

Mrs. J. W. Barker Property (3). Although site possibilities in northeast Bowdon are severely restricted by the extensive housing along State Highway 166 and the Bowdon Railway which parallels its east side, a site area of 30 to 50 acres might be developed from the holdings (56 acres ±) of Mrs. J. W. Barker which are east of the railroad, opposite Frances Street near the city limits. (See Figures 14 and 16; Plate 6.) Here, along an unpaved east-trending road that enters the property opposite Frances Street, the land is open and smoothly rolling over a broad upland area. The land considered as a site possibility would include that within the 1,100-foot contour on both sides of the dirt road and south for some 600 or 700 feet to a second unpaved road, with extension of this site area east for about 1,500 feet from the railroad or approximately to where the city limits cross this road. This site area may include parts of the holdings of Dillard Wood whose land adjoins the Barker property on the north end of the Letcher Inman property, which adjoins on the east.

The land breaks to a shallow drainage line at about the city limits along State Highway 166 and the railroad, and a new home has been erected here. Just south of this house, a rail lead could be taken into the site area, possibly at the maximum practicable grade. A better grade might be



(From U.S.G.S. Carrollton quadrangle)

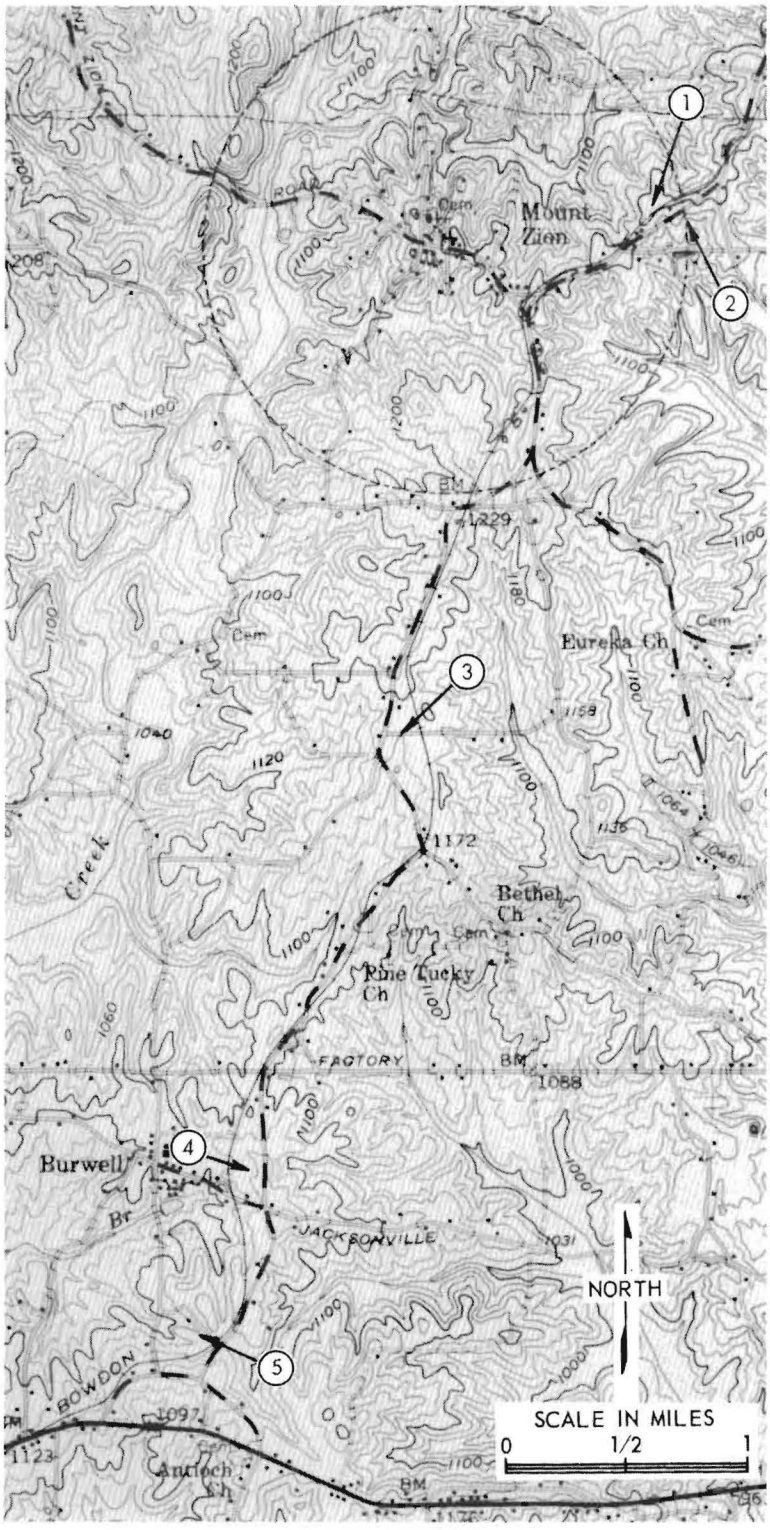
Figure 16. Topographic map of northeast Bowdon and Jonesville

achieved by bringing the lead in from the south side of this area.

A 6-inch hydrant is at the city limits along State Highway 166, as is a 2-inch gas line, which extends to Jonesville about a mile northeast up that highway.

Jonesville Tract (4). Although Jonesville does not have access to the Bowdon water supply, it does have natural gas service and might be able to accommodate a small light industry.

A possible site is east of the highway and railroad, within the area bounded by the unpaved east-west and north-south roads shown on the map, Figure 16. The part of this area north of the drainage line, reportedly owned by Mrs. O. R. Moon, has not yet gone over to housing, as has the southern part. If water can be made available, a small plant could be accommodated in this northern part of the area. A rail lead can come in at the north end.



(From U.S.G.S. Carrollton quadrangle)

Figure 17. Topographic map of Mount Zion site areas (1-2) and "Rural sites" (3-5)

Mount Zion (population 211) is about six miles northwest of Carrollton. (See Figure 1.) It is served by paved county roads that connect on the north to U. S. Highway 27 and on the south to State Highway 166 near Bowdon. The Bowdon Railway, which connects with the Central of Georgia Railway at Bowdon Junction three miles to the northeast, passes through Mount Zion on its route to Bowdon, some seven miles southwest, where this branch line terminates.

Mount Zion is located along a series of relatively narrow ridges that have fairly sharp slopes. (See Figure 17.) As a consequence, there are few extensive areas of land adaptable to industrial use. However, the most limiting factor to Mount Zion's future industrial potential is its extremely weak water situation. The city water supply is from a single well of 46 gallons-per-minute yield and its system of water mains is limited to the immediate center of town, with lines extending only a quarter of a mile or so in any direction. An earlier well that supplied the city, now contaminated and abandoned, had a yield of only 30 gallons per minute. The Ray Sewell Industries, employing about 75 persons, and a dozen or so families in town are dependent upon this water supply. There is no sewerage or gas supply in the city. Consequently, it is evident that Mount Zion has little potential for attracting additional industry.

Although well removed from the city water system, two possible site areas were noted here. Three others, described below under "Rural Sites," were noted between Mount Zion and Bowdon as being accessible from the Bowdon Railway.

Northeast City Limits (1-2). In the rear of the Martin Gas Company property, north across the Bowdon Railway tracks, is a 7- to 8-acre open tract of land that is smoothly rounded to a maximum height of 10 to 15 feet above the railroad level. (See site 1, Figure 17.) A rail lead could enter from the west side, but its extension to the highest part of the tract would not be practicable due to steepness of grade. There is a rail spur installed to the gas company's butane supply tanks.

South across the highway and northeasterly from the Martin Gas Company

property is an open field area of 15 to 20 acres that slopes toward drainage lines leading to the small lake on that side of the highway. (See site 2, Figure 17.) A rail lead could not be extended into this area.

Rural Sites (3-4-5). South of Mount Zion are three possible site areas that lie between the paved county road and the Bowdon Railway tracks. These areas, as identified from the U. S. Geological Survey's Carrollton quadrangle, are shown in Figure 17 as sites 3, 4 and 5. Site 3, which is approximately 1 mile south-southwest of the Mount Zion city limits, is an area of 20 to 25 acres lying on both sides of a dirt road that turns east off the paved county road. Site 4, east of the community of Burwell, consists of about 30 acres north of the Jacksonville Road at its intersection with the Mount Zion-to-Bowdon county road. Site 5 is just north of the junction of the Mount Zion-Bowdon county road with the connecting loop to State Road 166, about 2 1/2 miles northeast of Bowdon. It contains 10 to 15 acres in the northwest quadrant of this junction.

These rural sites are of sufficient size and levelness for rail-using industry, if adequate water supplies could be developed from wells or other sources.

Bowdon Junction is an unincorporated village about 10 1/2 miles northeast of Bowdon, on U. S. Highway 27. It is here that the Bowdon Railway branches off the Central of Georgia Railway main line. (See Figure 1.)

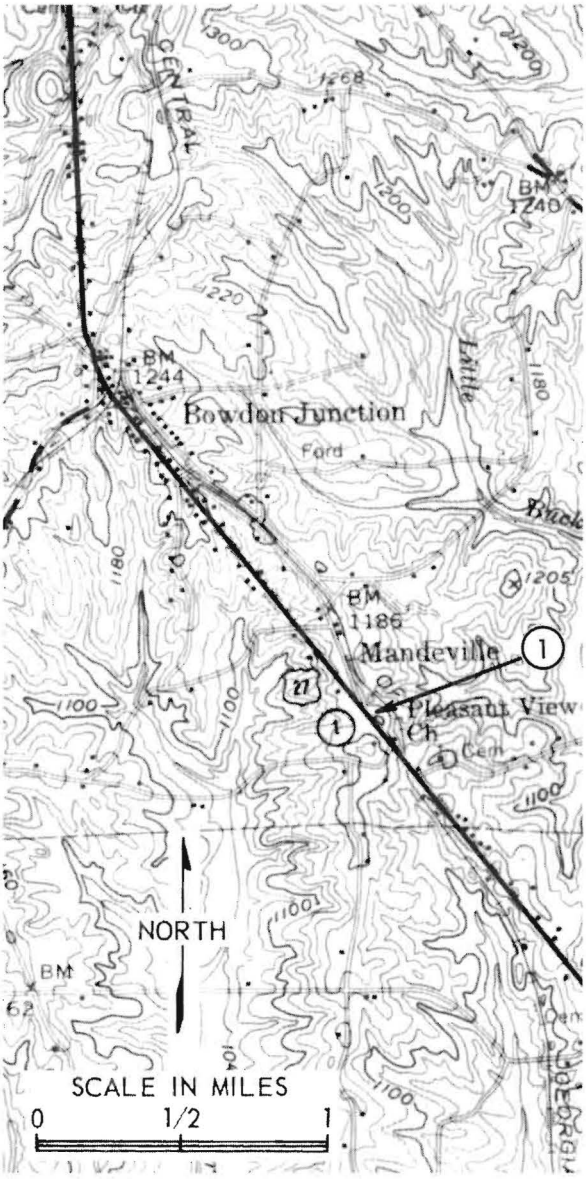
The town is situated on a narrow ridge, which is well dissected along its slopes and forms a drainage divide for several creeks. As a consequence, there is a minimum of level land, most of which is occupied by the highway and railroad rights-of-way and by commercial and residential developments.

Water supplies are obtained from individual private wells, and there is no sewerage. The only industrial attractions of this village are the railroad and a 3-inch high-pressure gas main of Atlanta Gas Light Company that passes through the town enroute to Bremen.

"Warrenville" (1). The only site area that seems of possible interest is on the south side of Mandeville, a community along U. S. Highway 27 about a mile south of Bowdon Junction. This community presently is being considered for a shopping center and is being called locally "Warrenville," after the developer of the projected center.

Here at "Warrenville," between U. S. Highway 27 and the Central of Georgia Railway, is an 8- to 10-acre rounded, partial knoll (cut off on its west side by the highway) of open land that rises a maximum of about 30 feet above the railroad on the north side and possibly as much as 50 feet on the south side. (See Figure 18.) By proper grading, however, extension of a rail lead into the tract from the north side appears feasible, although a fairly long lead may be necessary to obtain a permissible grade to the higher parts of the knoll.

Only well water would be available here. Gas could be gotten from the above-mentioned line that passes through Bowdon Junction.



(From U.S.G.S. Carrollton quadrangle)

Figure 18. Topographic map of Bowdon Junction area.

Temple (population 788) is in northeast Carroll County, just east of the Haralson County line and some 11 miles north of Carrollton. (See Figure 1.) Topographically, the city is located on a series of broad spurs that form a minor drainage divide for tributaries to the Little Tallapoosa River about 3 miles to the south. The main line of the Southern Railway follows this ridge route through the city in a northwest-southeast direction, being paralleled most of the way by State Highway 113. Normal residential growth has claimed much of the relatively level land along both sides of these rail and highway routes.

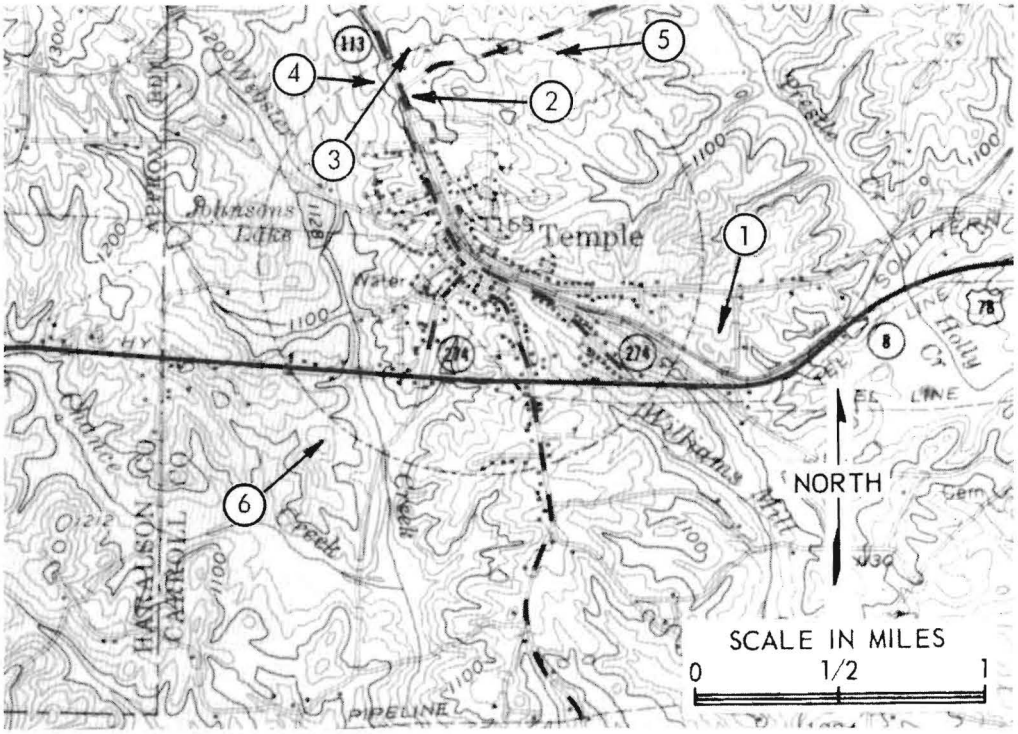
The city of Temple obtains its water supply from Johnson and city lakes in the west-central part of the city. There is no sewerage, and the city is not served by natural gas.

Dewberry-Johnson-Riggs Properties (1). About 30 acres, in the three ownerships of Hattie Dewberry, V. G. Johnson, and J. A. Riggs, are between the Carl Taylor Road (old Bankhead Highway) and the Southern Railway on the east side of Temple. (See Figures 19 and 20; Plate 7.) The area, largely outside the city limits, is partly wooded and has an elevation range of over 40 feet, with the general slope being from the Taylor Road south to the railroad. The eastern boundary of the area is a north-south dirt road that crosses the railroad to connect with the Bankhead Highway (U. S. Highway 78). The property of Jack Raburn lies east of this road.

The railroad is here double-track, with a spur taking off near the west side of the area to serve a gas tank. A rail lead into these properties could come off near the point of take-off for this existing spur. Extension of such rail lead into the area will be limited to its lower parts adjacent to the main line, due to grade problems. This would probably be best in any event, since there are several houses along the Carl Taylor road.

There is a 4-inch water line along the Bankhead Highway at the city limits.

This area would afford visibility from the Bankhead Highway of any



(From U.S.G.S. Carrollton quadrangle)

Figure 19. Topographic map of Temple, with locations of site areas.

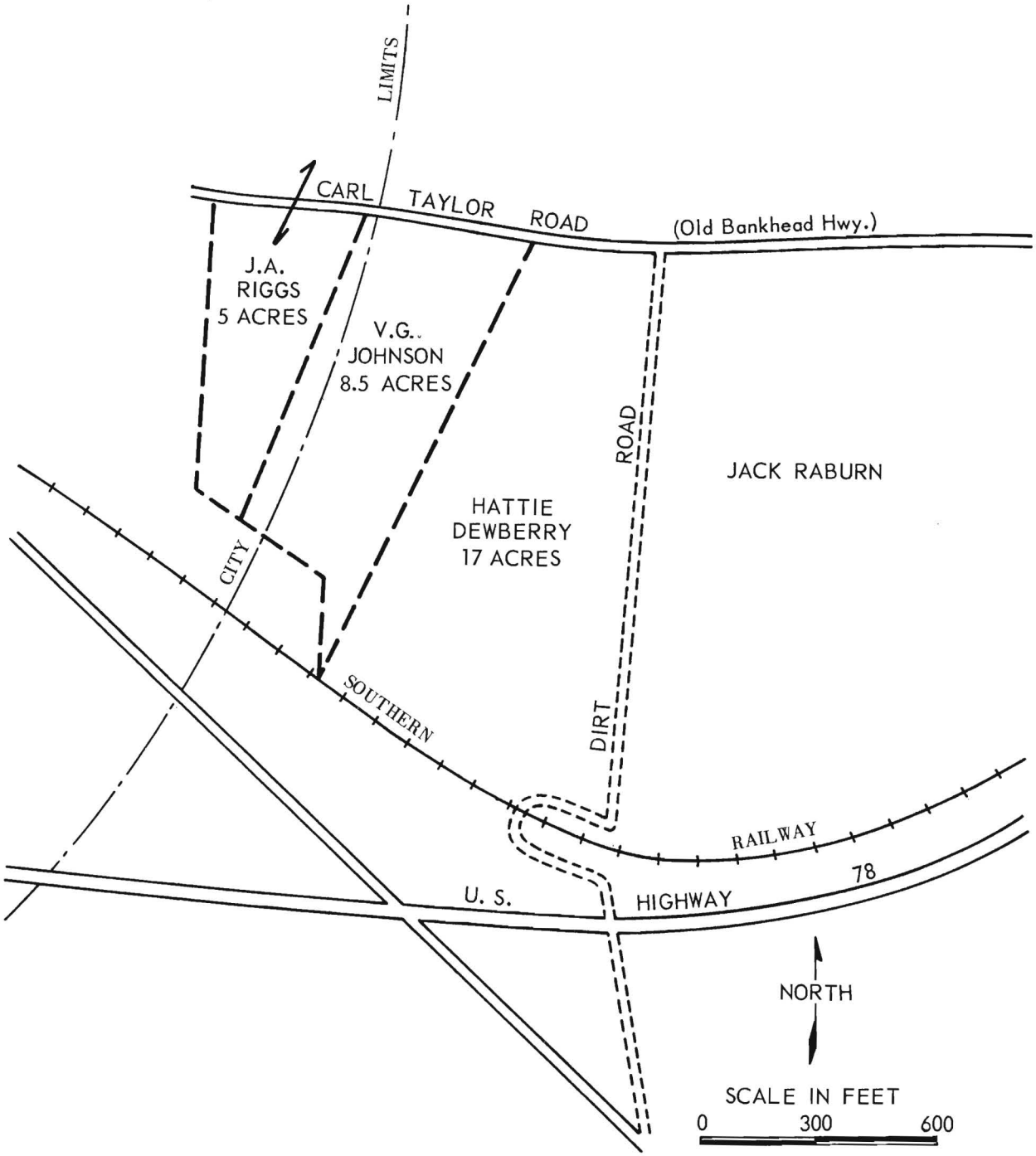
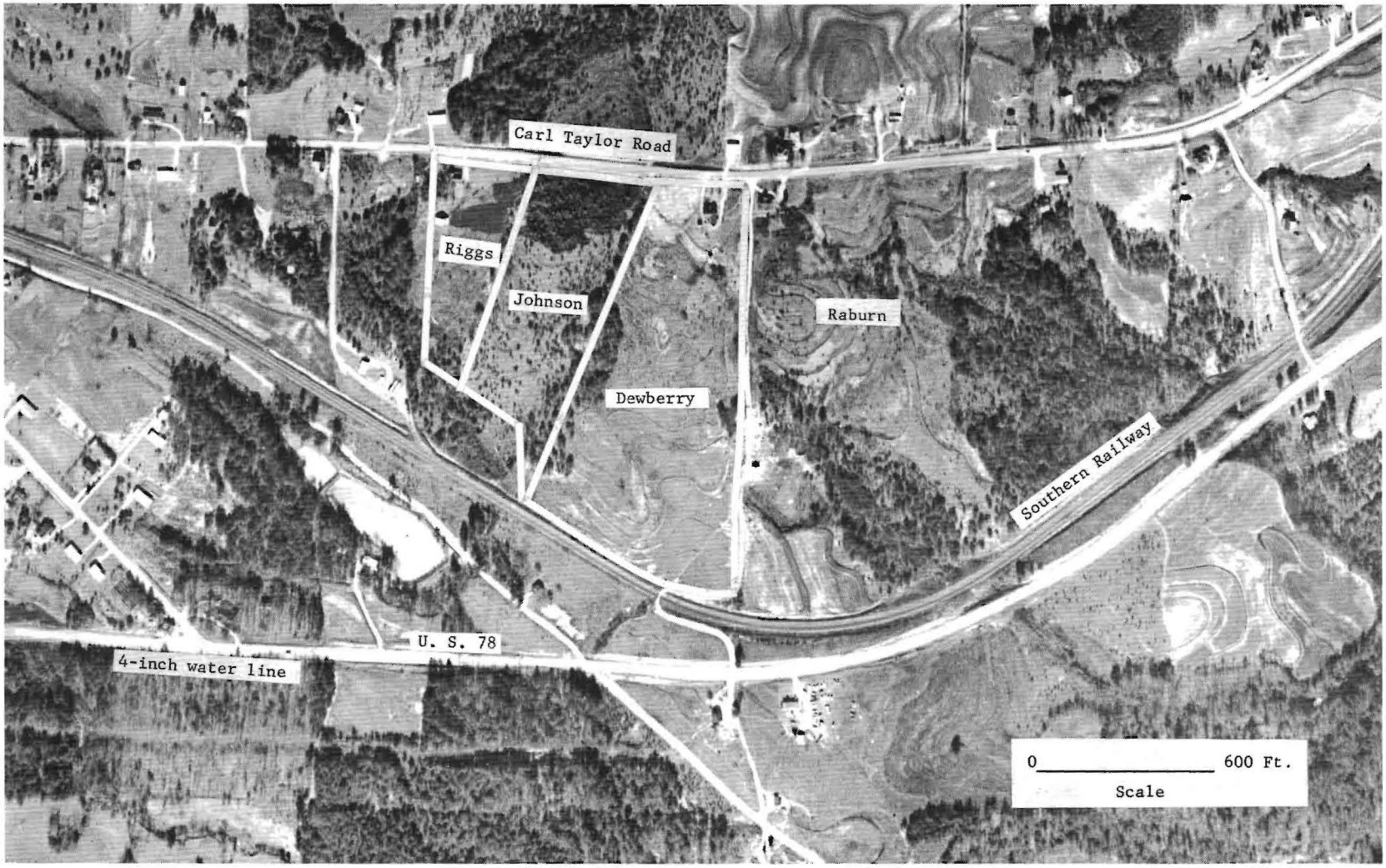


Figure 20. Sketch map of properties composing site area in southeast Temple.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 7. Site area, including Riggs, Johnson and Dewberry tracts, along the Southern Railway in southeast Temple. Note existing rail spur south of the Riggs tract.

plant structure erected here, and as a consequence, this site has a definite prestige value.

Mrs. Lou Chance Place (2). In the north part of Temple, the Sewell Manufacturing Company has a plant and owns extensive acreage on the east side of State Highway 113. The Southern Railway here parallels the highway on its west side. (See Figures 19 and 21.)

Adjoining the Sewell property on the north and extending to Rainey Road (paved) is the old Rainey property, reportedly now owned by Mrs. Lou Chance. The farm is estimated to contain about 30 acres. The land in the western part of the farm is quite level; this is where the farm homestead is located. In its eastern extension back to an unpaved north-south road, the land drops sharply 40 feet or more to form a small valley partly occupied by a pond.

It would be possible to bring a lead from the railroad into this property at grade.

An 8-inch city water main goes to the water tank on the adjoining Sewell Manufacturing Company property. There also is a power substation on the Sewell property.

Hill Estate Properties (3-4). North across the Rainey Road on the east side of State Highway 113 to beyond the Temple city limits is largely open field land, most of which is within a 20-foot elevation difference. (See site 3, Figure 19; also Figure 21 and Plate 8.) There is a tenant house at the corner of Rainey Road and State Highway 113 and a farmstead to the east along Rainey Road. The railroad could enter this property at grade.

The above land is part of the Hill Estate, which also includes the land west of the Southern Railway for about 4,000 feet, extending north from Milner Street. (See Figure 21; Plate 8.) Along this frontage to a depth of about 500 feet west from the railroad the land is largely open and generally is within a 20-foot elevation range. (See site 4, Figure 19.) Consequently, this acreage affords excellent opportunity to develop sites for rail-using industry.

Sage Street, which is on the west side of the railroad (see Plate 8), could be projected into this potential site area, thus overcoming the objectionable feature of having to cross the railroad to obtain street access into the area.

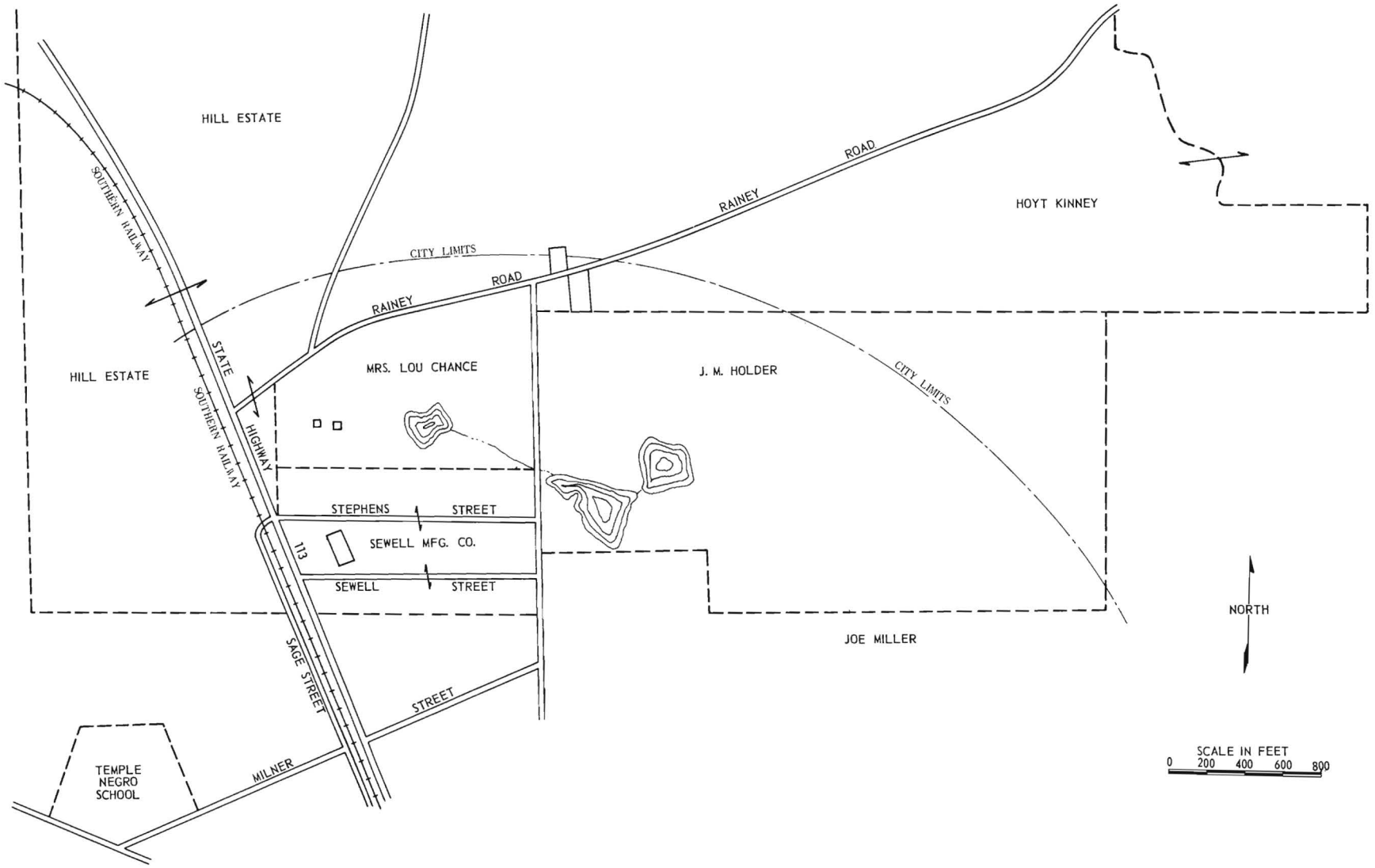
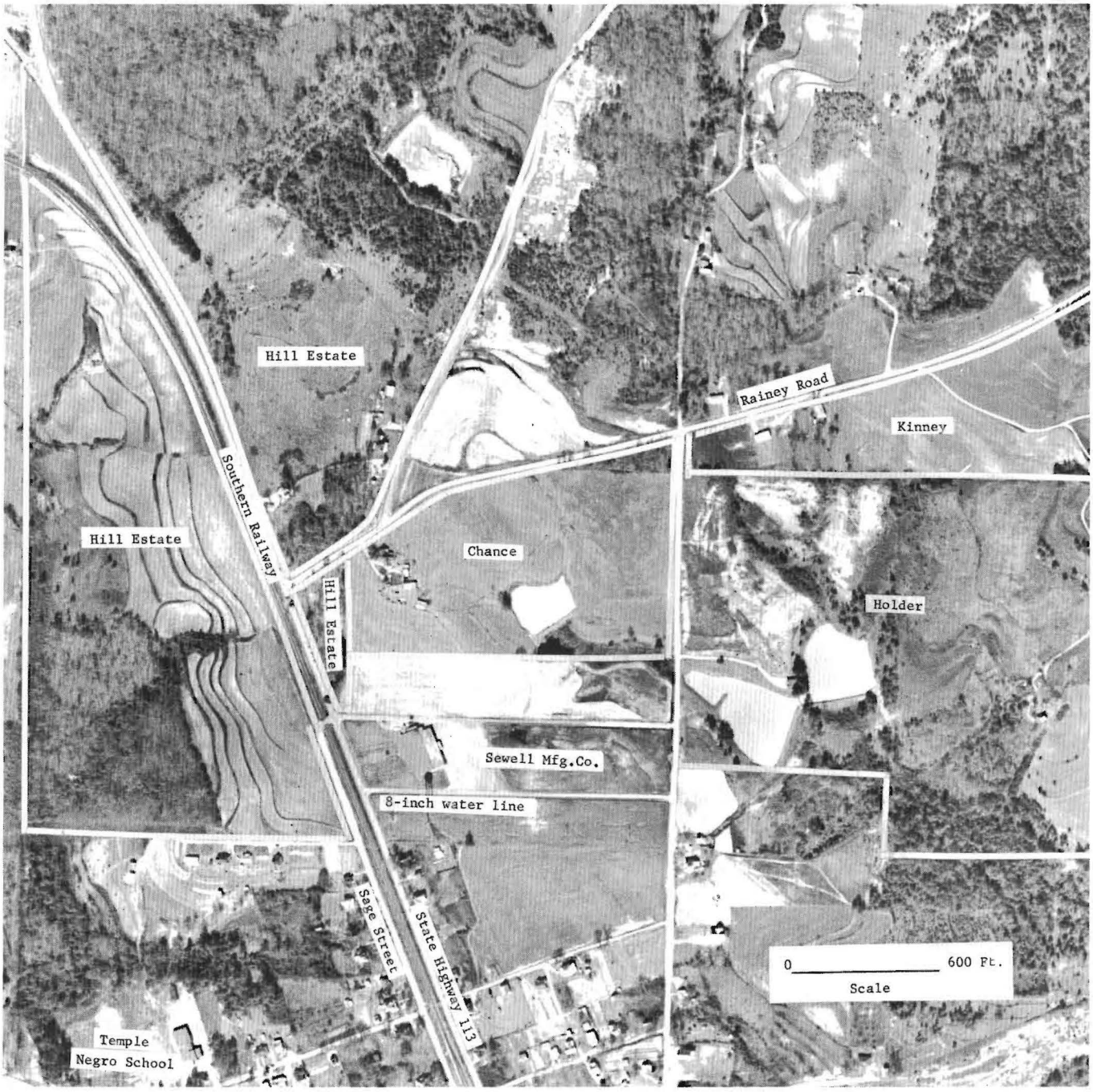


Figure 21. Sketch map of northwest Temple area, showing properties adaptable to industrial development.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 8. Site areas in northwest Temple. The Hill Estate and Chance properties offer sites for rail-using industries; the Holder-Kinney properties, for non-rail industries.

Holder and Kinney Tracts (5). A considerable acreage of farmland is owned by J. M. Holder and Hoyt Kinney on the south side of Rainey Road, about one-half to three-quarters of a mile east of that road's intersection with State Highway 113. (See Figures 19 and 21; Plate 8.) Here, partly within the city limits, are 50 acres or more of open, rolling pasture and other field lands that could be developed into a plant site.

A 6-inch water main is along State Highway 113 to the Sewell plant (see above). This area drains naturally to Trestle Creek on the east.

Hoyt Kinney (6). A large acreage also is owned by Hoyt Kinney on the south side of the Bankhead Highway (U. S. 78) from the Center Point Road west to the county line, except for the frontage along U. S. Highway 78. These holdings lie both within and outside the Temple city limits. (See Figure 19.)

Some of the land along the Center Point Road, according to the topographic mapping of this area, would appear to be adaptable to non-rail sites, especially just south of the city limits on the west side of this road.

There is a 6-inch water line to within 1,000 feet of the city limits along the Bankhead Highway; a 2-inch line extends to the city limits.

This small city (population 203), on U. S. Highway 27 about 7 miles south of Carrollton (see Figure 1), is located mainly north-south along a ridge, with the land generally breaking away sharply from either side of the highway. There is no railroad service. The city has no sewerage and the water system is limited to a single well of 30-gallons-per-minute capacity and a 4-inch water line to the city limits, mainly along the highway. By early summer of 1962, the Atlanta Gas Light Company expects to bring natural gas to Roopville through a 3-inch medium-pressure (50 pounds) line. However, in view of the city's very weak water situation, the industrial potential of Roopville is minimal and any future demands for industrial site acreage can be expected to be quite limited. Only two site areas were inspected here. (See Figure 22.)

Henry Bell Tract (1). A two-acre tract, owned by Henry Bell, is available south of the central part of the business district, next door to the G. T. Huff grocery. This is an open tract of land that fronts on the east side of U. S. Highway 27 and slopes moderately to a street at its rear. The location here would be suitable for a small light industry.

Henry Brock Tract (2). A 12- to 13-acre tract of open land, owned by Henry Brock, fronts the Veal Road immediately southwest of that road's junction with U. S. Highway 27 on the south edge of Roopville. A flat area of 5 to 6 acres, with a small tenant house on it, is nearest the junction but the land here breaks away sharply to the northwest. Southwesterly, the land rises gradually up a hillslope that crests some 25 to 30 feet above the level of the road junction. A homestead is on top of this hill. By grading some of the hillslope, a plant site of around 10 acres could be developed here.

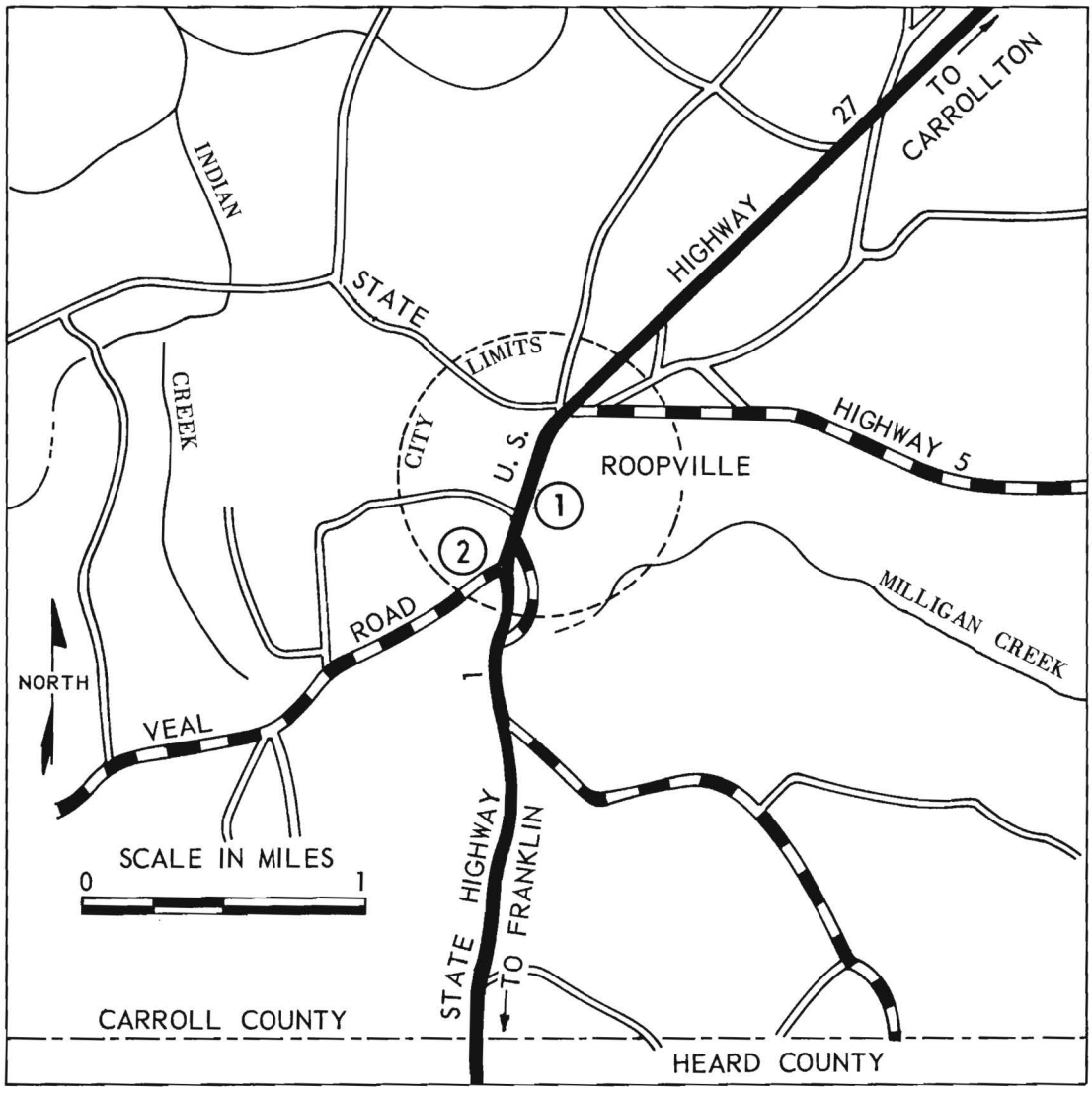


Figure 22. Index map of Roopville, with locations of site areas.

A city of less than 350 population, Whitesburg is about 9 miles southeast of Carrollton and a mile northeast of where the Central of Georgia Railway crosses the Chattahoochee River. (See Figure 1.) The general area is distinctly hilly, so that industrial site possibilities are naturally limited. On the north side of the city, residential housing along the east side of the Central of Georgia Railway has rather completely usurped such lands as might otherwise have been available for railroad-using industry. Moreover, the city has no sewerage, no gas system, and its water system, supplied by two wells yielding 25 gallons per minute each, is confined principally to 2-inch lines that extend short distances beyond the city limits along U. S. Highway 27 Alternate (north-south). So long as this weak water supply situation exists, Whitesburg will have only minimum attraction for industry. This limited potential is further handicapped by its poor site situation. However, the city is quite close to the Chattahoochee River and could improve its water situation by going to that source of supply. Even so, this would not compensate for the limited site situation.

A. O. Dyer Property (1). Heavy industry of substantial size might be accommodated on the 185 acres of land owned by A. O. Dyer along the Chattahoochee River on both sides of U. S. Highway 27 Alternate, within a mile of the south city limits of Whitesburg. (See Figures 23 and 24; Plate 9.) Most promising for development would be the acreage west of the highway. There the flood plain rises northward into a low, open, ridge spur which is separated by a small branch and valley from similarly elevated, rolling land that extends west to the Central of Georgia Railway. A building site of 20 to 40 acres might be developed in this area adjacent to the highway, depending on the extent of flooding there by the river. An equivalent or even larger acreage might be developed in the area west of the branch to the railroad, owned by J. A. McMullen and the Georgia Power Company. Although adjacent to the railroad, the ridges are commonly separated sharply from it by minor drainage. There is a small lake in this area along the railroad, on the McMullen tract.

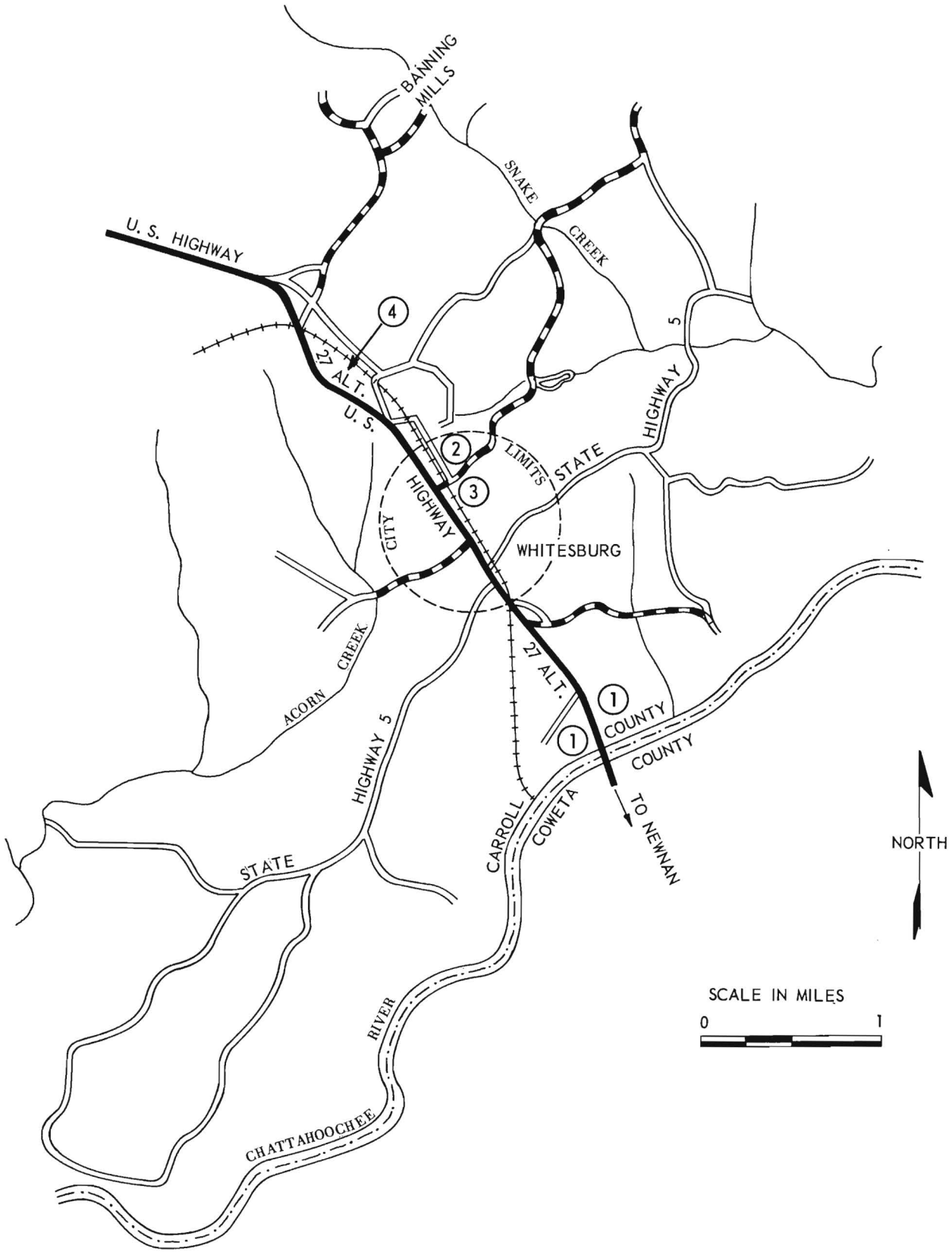


Figure 23. Index map of Whitesburg area, with locations of possible sites.

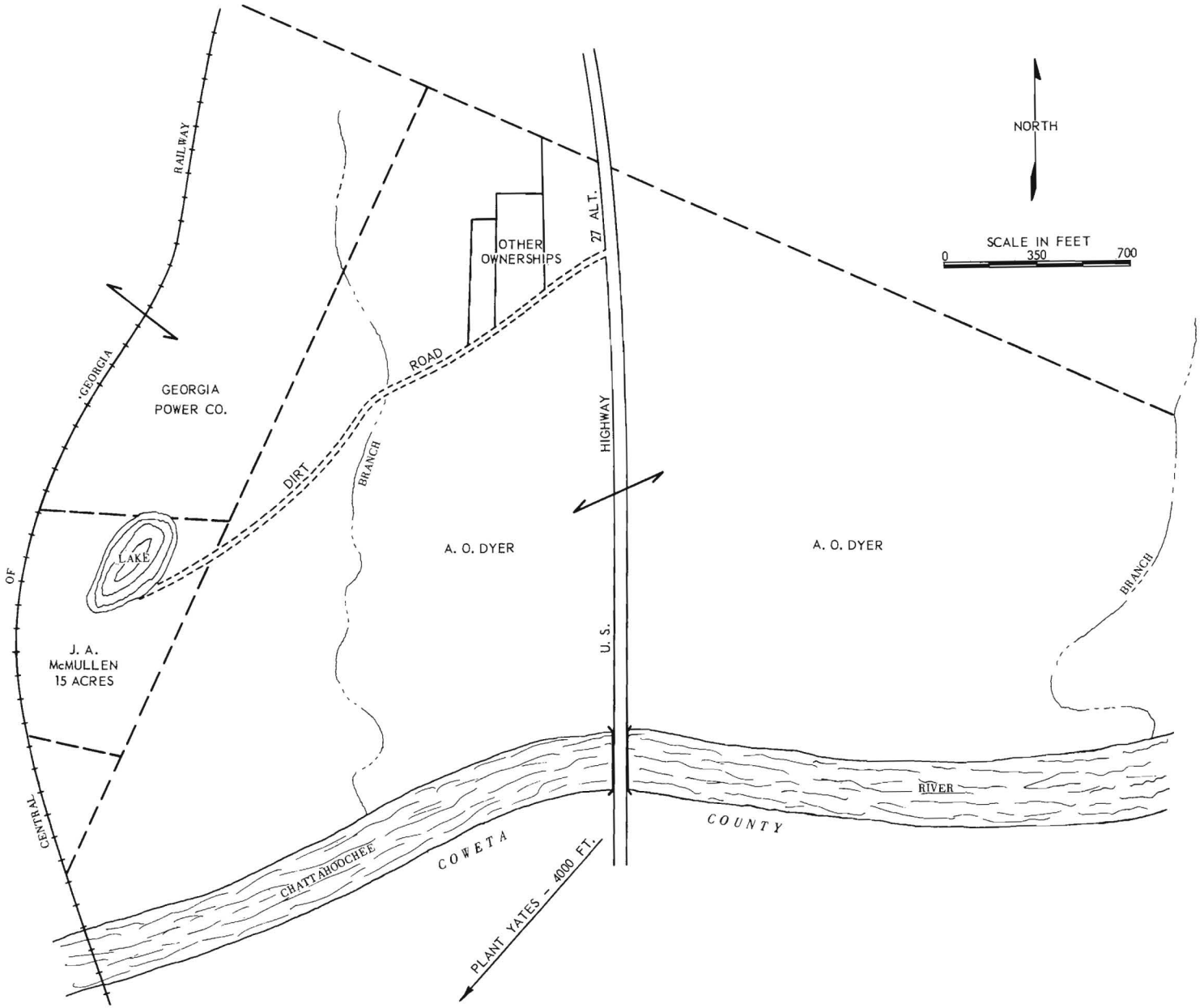


Figure 24. Sketch map of the A. O. Dyer farm and adjoining properties, about one mile south of Whitesburg.

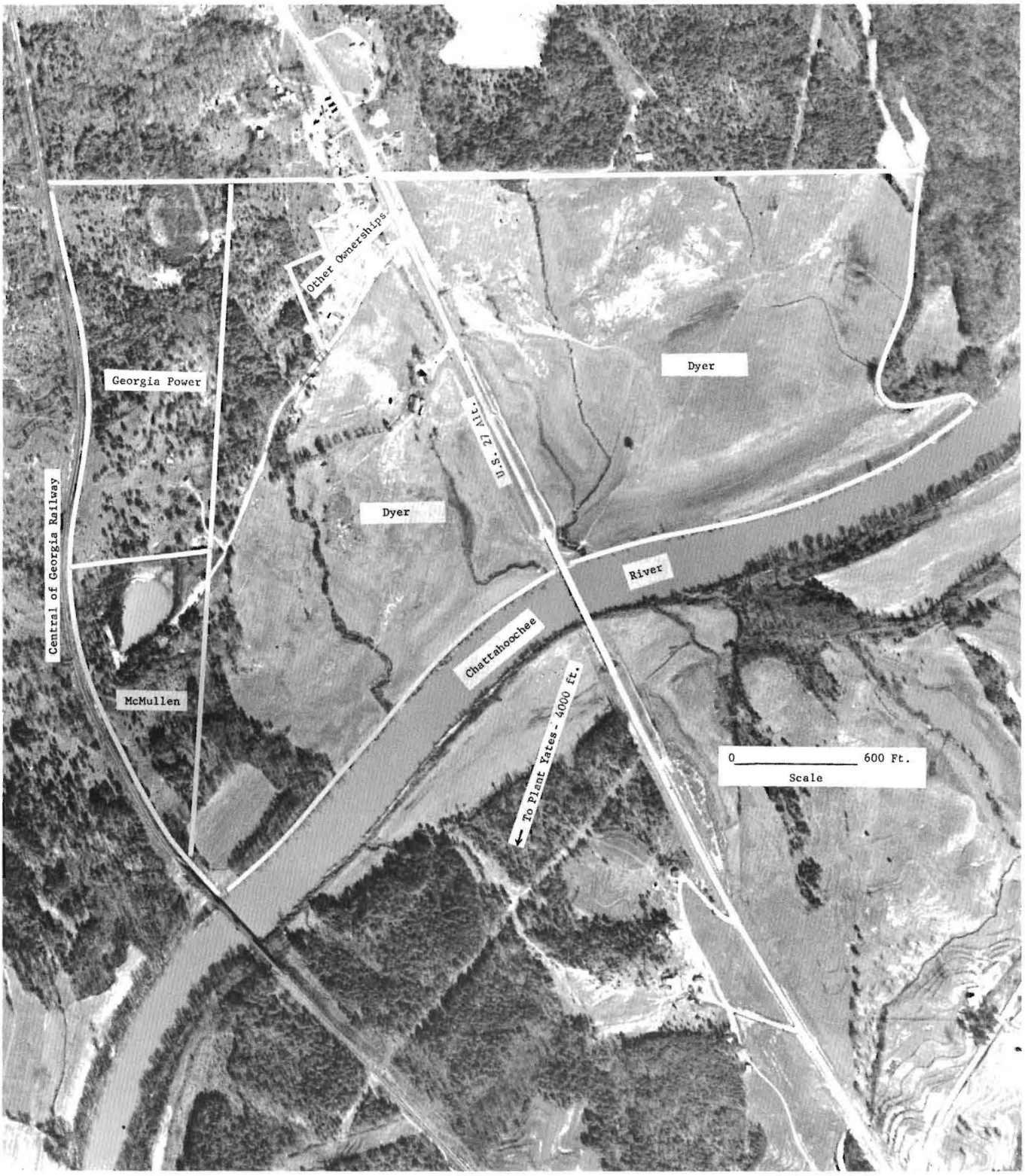
A lead track from the railroad can take off about 75 yards north of the railroad guidepost marked "S297" and, with reasonable cut and fill, can be extended east across a flat-topped ridge on the Georgia Power tract to the branch, especially if the trackage parallels the east-west dirt road in the northern part of the Dyer property. A fill of about 100 yards length and maximum depth of 10 to 15 feet would be required to cross the branch and valley in bringing the rail lead into the area adjacent to the highway. To reach this part of the property, the lead would be about one-half mile long.

Extensive grading on this property may not be everywhere possible, since rock outcrops have been noted at several points along the railroad and in the valley of the small branch. In general, the soil and weathered zone appear thin, probably averaging only 3 to 5 feet deep.

East of the highway, the Dyer property has considerable relatively flat acreage, especially in the second-terrace areas. Here Southern Natural Gas Company's transmission line crosses in a north-south line to Georgia Power Company's Plant Yates across the river in Coweta County. Just east of the right-of-way of that gas line are 30 acres or more of open land in this second terrace area where a building site could be developed with practically no grading. Extension of rail service across the highway to this area would not appear economically feasible. Either Atlanta Natural Gas Co. or Southern Natural Gas Co. could service industries located on the Dyer property.

The Chattahoochee River here has a recorded (October, 1954) daily minimum flow of 302 million gallons.[1/]

1/ Thomson, M. T., and Others. The Availability and Use of Water in Georgia. Georgia Department of Mines, Mining and Geology Bulletin 65 (1956), p. 123.



(Photo by Southeastern
Photogrammetric Engineers, Inc.)

Plate 9. The A. O. Dyer farm and adjoining properties, about one mile southeast of Whitesburg. This is the only major river-rail site identified in Carroll County.

Rome Kraft Company (2). The only area of apparent interest identified east of the Central of Georgia Railway inside the city limits is a tract on the north side of Whitesburg, fronting along the unpaved street that parallels the railroad between the Whitesburg Methodist Church and the cemetery some 500 feet to the north. (See Figure 23.) This tract, reportedly owned by Rome Kraft Company, contains some 28 acres and is well wooded, mainly by pines, so that observation of the topography is difficult. However, the land apparently drops sharply to a drainage line within 100 yards east of the street but, as observed within 1,000 feet or so northeast along the paved road past the church, the land again rises to reasonable levelness.

According to local information, efforts have been made to acquire the property from Rome Kraft but without success. Nevertheless, this appears to be the most feasible property for industrial development within the city limits and further efforts should be made to obtain local control for that purpose, especially if the city is able to improve its water situation.

John Hanson Tract (3). South across the paved road from the above Whitesburg Methodist Church is a partly wooded tract of about two acres, owned by John Hanson. (See Figure 23.) A rail lead could be extended into this property.

North on State Road 16 (4). Unidentified property between U. S. Highway 27 Alternate and the Central of Georgia Railway, about one-fourth mile north of the city limits, has possibly 10 acres or so here. A rail lead could be extended to this south end. (See Figure 23.) Northward in this area, the land rises sharply into a hill. There are several houses on the highway side of this southern end of the area.

The city's 2-inch water main is within a 100 yards or less along the highway.

Some additional land between the railroad and highway, lying on both sides of the city limits, is open and might be used for small industrial plants, although the width is generally about 200 feet or less.

Carrollton. Carrollton, as the county seat and principal city in the county, might naturally be expected to have an industrial potential superior to those of the other municipalities in the county. The present survey of the site situation there substantiates this belief, for Carrollton is best able to offer to industry those basic necessities for operation -- electric power, fuel (natural gas), water, and sewerage, at least to the extent generally considered minimum and at locations capable of accommodating substantial industrial operations. Not the least of Carrollton's advantages is its proximity to the metropolitan area of Atlanta. On the completion of Interstate Highway 20 through the north part of Carroll County, travel time between the two cities will be substantially reduced from the 55 minutes or so now required.

The most notable weaknesses in the Carrollton site situation are the weak water supply situation, the uneven distribution of sewers and their limited capacities (especially trunk sewers), and the lack of a sewage disposal plant. Of these three weaknesses, water supply appears to be the most serious problem related to Carrollton's future industrial growth. In periods of extended drought, such as the 10-month drought of 1954, the flow of Little Tallapoosa River can be reduced to zero.[1/] The city water system then would have to depend upon releases of water from Lake Carroll, which has a reported capacity of 250 million gallons. At the current average daily consumption rate of 1,800,000 gallons (about one-half industrial use), the lake affords only about 4 1/2 months supply. Consequently, it is evident the future accommodation of new industry in Carrollton will be definitely limited -- as will normal population growth -- unless additional water storage capacity is made available to the city system. This problem is now under study by the city administration. The lack of a sewage disposal plant

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1/ On September 28, 1954, the Little Tallapoosa River had zero flow at a point just east of the Old Concord Church about 2 miles northeast of the Carrollton City limits. (Georgia Department of Mines, Mining and Geology, Information Circular 17, p. 79, map no. 1069.) Thus, the minimum daily flow of 170,000 gallons recorded for Carrollton in October 1954 (Georgia Department of Mines, Mining and Geology, Bulletin 65, p. 126) evidently reflects discharge from Lake Carroll.

is a related but no less serious problem. As the flow of the Little Tallapoosa River declines in time of drought, that stream's capacity to dilute sewage and industrial wastes is lessened and the danger of creating a health menace is increased.

Even though the established industrial area presently existing along Alabama Street in northwest Carrollton is adequately serviced by utilities and has some additional acreages available for new industry, such as the limited acreages of the Carroll County Development Corporation and the Green-Barnes and Hammond tracts, this area has definite shortcomings. In the first place, the available site areas are limited to a total of probably less than 100 acres and, in general, these areas appear to be relatively high cost in respect to preparation, since all will require more or less grading for plant building sites and/or rail lead installations will be long and expensive. At best, 100 acres is not enough to insure the industrial growth of Carrollton over the next 25 years or so. Again, this northwest area presently is poorly situated in respect to major highway routes, although the proposed circumferential highway will improve this situation, if and when it is built.

Carrollton should begin now to plan in a more formal manner for an area that can serve the varied needs of a number of sizeable industrial plants, both rail and non-rail users. A beginning should be made toward the development of an industrial district where, by the concentration of manufacturing plants within a specific area, the maximum of utility services can be provided at a minimum cost, along with many other locational advantages such as prepared building sites, paved access streets, and proximity to a major highway route.

In the present survey, the area that appears best able to meet these future needs of Carrollton are the Crider, Southwire Realty, and McPherson properties on the south side of the city, along U. S. Highway 27. Here is an area sufficiently large to provide sites for both rail and non-rail users; water, gas, and sewer lines of capacities adequate for the initial development stage of the industrial district are already installed here. Also, U. S. Highway 27 is along the west side of the area, and the proposed circumferential highway would cross east-west near the middle of these properties.

The Hughes-Kaylor properties in northwest Carrollton are an alternate

choice for development of an industrial district. This area possesses a limited advantage in its proximity to the river, but this is largely offset by its lesser acreage, less favorable topography, and more distant location from major highway routes, as compared with the above Crider-Southwire Realty-McPherson area.

The best non-rail area is the property of Mrs. D. L. Burns on the east city limits, but adequate utility services to that area are still lacking.

Villa Rica. From the standpoint of size and apparent future industrial potential, Villa Rica is probably second ranking in the county. It is the closest of Carroll County cities to Atlanta, and this advantage will be enhanced by the completion of Interstate Highway 20, which will have its route along the south side of Villa Rica. The city's industrial potential is further favored by the numerous areas both within and outside the city limits that could be adapted to rail-using and/or non-rail-using industries. In general, the city has a water system with excess capacity, has plans for further increase of its water supply, and 6-inch water mains are within economic reach of most of the favorable site areas both in and out of the city.

However, existing gas lines to these areas are of very limited capacity and sewers generally do not serve such areas. Another deficiency is the limited capacities of the sewage disposal plants, but consideration is presently being given to solving this problem through use of an oxidation pond. It also seems desirable that some thought be given to extension of the sewer system to serve the more promising of the site areas reviewed here.

Although the industrial potential of Villa Rica is favorable in respect to its site situation, community size and leadership, and general economic activity, the future currently is clouded by the uncertainties stemming from the disastrous explosion of the municipal gas system in 1957. The outcome of suits now pending against the municipality, as well as judgments already rendered, make difficult the forecasting of this city's future, particularly in respect to the attraction of new industries.

If and when Villa Rica's future becomes sufficiently clear and favorable, it would be advisable to obtain definite control of an

industrial site area to which utilities can be readily extended. The Arthur Humphries property at the east edge of Villa Rica would afford opportunity for the development of a modest acreage to which extension of a sewer would be necessary. Subsequent increase in the size of the gas main might be desirable. To minimize the hazards of workers crossing the railroad, construction of an access street from downtown Villa Rica along the east side of the railroad to the Humphries tract should be considered. However, if these improvements are made, development of additional acreage on this side of town, such as the Hembree property, should be undertaken to reduce the average per-acre investment.

For any non-rail prospect, the Raburn Estate tract on the north side of Villa Rica is well situated with respect to utility services. As a long-range development or for a project of size that can justify the costs, the Jack Lassiter property on the north side of the railroad, near the west city limits, could accommodate either one large industry or a group of smaller plants, as in an industrial district. However, either of these types of development will necessitate unusually long extensions of water and gas lines, and an access road from the Bankhead Highway. A street connection to State Highway 101 through the "Fullerville" section of the city would be desirable.

Bowdon. On the basis of appearance and topographic situation, Bowdon would have a substantial industrial potential. However, these advantages are minimized by the lack of sewerage and a weak water system which has not been extended beyond the city limits. The existing 6-inch water mains generally are adequate, especially for the limited water supply source upon which Bowdon presently depends. The gas system has been extended outside the city limits, but its mains are generally only 2 1/4 inches in diameter. Consequently, industrial site areas must necessarily be developed inside the corporate limits, and suitable areas there are limited. However, Bowdon is fortunate to have one sizeable area, the Everhart tract in the south part of the city, that is well situated with respect to existing water and gas lines of adequate sizes and proximity to major highway routes. Rail extension from the Bowdon Railway appears practicable, although the advantage of this branch line's service is minimal.

The property of Mrs. J. W. Barker in the northeast part of Bowdon offers an excellent situation for a sizeable industrial development, provided the land is available and local objections are not too strenuous against this type of development in this dominantly residential part of the city. On the whole, Bowdon's size and location tend to limits its future potential. This could be changed by strengthened water and gas systems and the installation of sewerage.

Mount Zion. Although this is a very small town, without natural gas or sewerage and topographically not favored in respect to site areas, the most limiting factor to its future industrial potential is the weak water system. With a single well of very small yield, this city cannot expect to attract additional industry.

Temple. The industrial potential of Temple is definitely limited by its size, relatively unfavorable topographic situation, and the lack of both sewerage and natural gas. Nevertheless, the city does have a favorable water supply and a system of mains of ample size to the area best suited for industrial development. This area is along State Highway 113 in the north part of the city, where the Sewell Manufacturing Company established its operations in recent years. Here are several properties that are adaptable to either rail- or non-rail-using operations, the choice depending on availability of properties and the size and character of the project. A more limited area but one that affords a "prestige site" within view of the Bankhead Highway (U. S. 78) includes the Dewberry, Johnson, Riggs properties on the east side of Temple.

Roopville. A town of this small size, with a water system depending upon a single well of small yield and without railroad or sewerage, could not have much industrial potential, even if its topography were more favorable to development of industrial site areas. Even the anticipated installation of a natural gas system will not appreciably enhance the town's industrial potential. The Henry Brock tract suggested on the south side of town should be adequate to accommodate any industry that seeks to locate here.

Whitesburg. The relatively hilly topography of the Whitesburg area has naturally limited industrial site possibilities. Residential housing

and highway and railroad rights-of-way have served to further restrict the availability of land in or near the town. Moreover, the city has neither sewerage nor gas system, and its water system, based on two small-yield wells, consists of 2-inch lines that extend mainly along one street (U. S. Highway 27 Alternate) to only short distances beyond the city limits. At best, a town of the size of Whitesburg can expect a very limited industrial potential, but as long as its weak water situation exists, there can be only the minimum attraction for industry. Fortunately, however, the Chattahoochee River is close by and the town can improve its water situation by going to that source of supply.

Whitesburg's best future industrial opportunity would appear to be the lands of A. O. Dyer and others along the Chattahoochee River. With natural gas and electric power in proximity to this river-rail site, there is a reasonable chance that a major industry will occupy this site. Such favorable assemblages of river, fuel, power, railroad, and land are becoming increasingly difficult to find.

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